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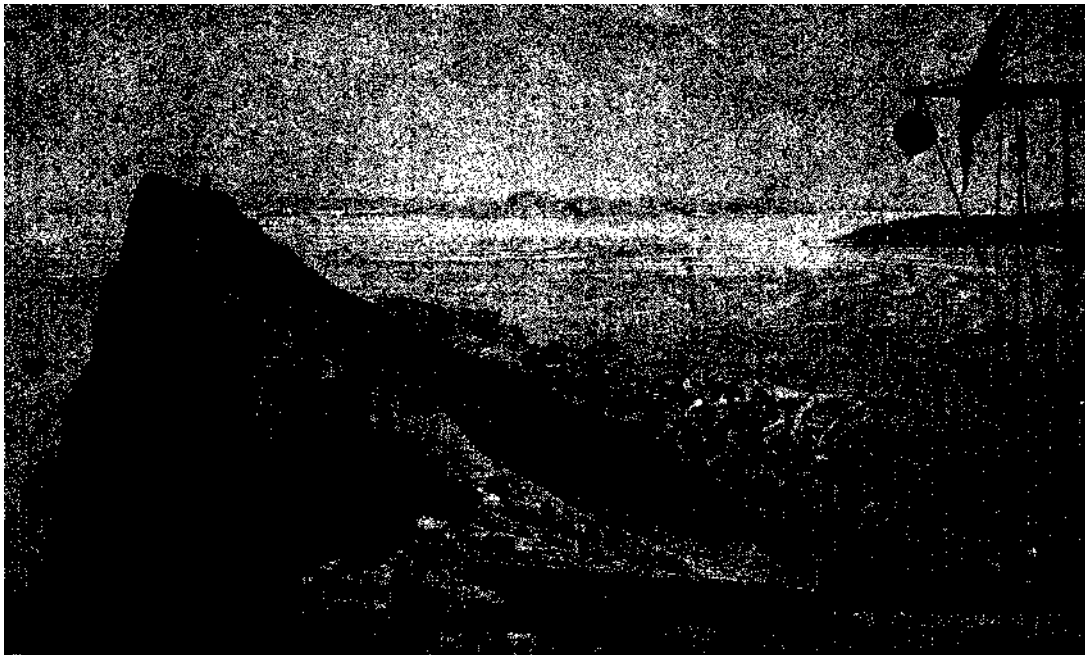
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GIBRALTAR; THE WESTERN GATEWAY OF THE MEDITERRANEAN

THE MEDITERRANEAN

BY

O. J. R. HOWARTH, O.B.E., M.A.

SECRETARY OF THE BRITISH ASSOCIATION"



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Chapter X, in which a few guiding points in the historical geography of the Mediterranean are summarily stated (for amplification from other sources), will be taken or omitted at the teachers' discretion.

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THE MEDITERRANEAN

I

GEOGRAPHICAL OUTLINE

1. *Extent and Shape.* The Mediterranean Sea separates southern Europe from northern Africa and from



I. Gibraltar from the strait

south-western Asia. It is entered from the Atlantic Ocean by the Strait of Gibraltar, which, at its narrowest, is eight and a half miles across. From here the sea extends 2,400 miles eastward to the coast of Syria (Asia).

The sea is irregular in shape. This is due chiefly to the three great peninsulas of southern Europe which

project into it. In the west the Iberian peninsula separates it from the Atlantic Ocean. In the centre is the Italian peninsula ; to the east of this, the Greek peninsula. Islands, too, are many. In the west there are the Balearic Islands, Corsica, and Sardinia, together with Elba and others under the Italian coast. From the southern end of the Italian peninsula the island of Sicily stretches toward the coast of Africa. Malta and other islands lie south of it. Most of the coasts of the eastern Adriatic Sea and the Greek peninsula are fringed with islands, and between the east coast of that peninsula and Asia Minor the sea is dotted with them. To the south of the Aegean is the large island of Crete, and in the extreme east of the Mediterranean, that of Cyprus.

2. *Divisions.* These peninsulas and islands break up the sea into several parts, some of which have different names : the most important are the Adriatic Sea between Italy and the Balkan peninsula, and the Aegean Sea which contains the Archipelago, more usually known now as the Aegean Islands. The head of the Adriatic is the northernmost point of the Mediterranean, and south of its entrance there is a deep dent in the coast of Africa, called the Gulf of Syrtis or Sidra. If we take the greatest breadth of the sea to be here, between the heads of the Adriatic and the Gulf, it is nearly 1,200 miles, so that the Mediterranean is roughly half as broad as it is long. The eastern part of the sea, and lands bordering it, are sometimes called the Levant : this word means rising, the part toward the sunrise, the east.

3. *Political Territories.* The Mediterranean, then, has a complicated shape : for its size, therefore, it has a long coast-line, and this coast-line is divided between a large number of different countries. Starting in the west, on the European side, and working around the sea eastward, then southward, then westward, we find these :

- (1) In Europe—Spain, France, Italy, Yugoslavia, Albania, Greece, the Turkish territory in Europe.
- (2) In Asia—Asia Minor (Turkish), Syria.
- (3) In Africa—Egypt, Italian Libya, Tunis, Algeria, Morocco.

Some of the lands surrounding the Mediterranean have been important from early times in the history of human civilization : the names of Egypt, Palestine, Greece, and Italy occur to us at once, and these, we shall find in a later chapter, are not the only ones. To-day there are half a dozen States whose home territory or colonies border or are situated in this sea. Spain, France, and Italy reach across it from their own shores, to hold or to protect territory in the islands and in Africa. Yugoslavia borders the Adriatic on the east. Greece, besides its peninsula, holds most of the Aegean islands and territory on the mainland to the north. Turkey we have mentioned above also. Lastly Britain possesses Gibraltar at the entrance to the sea, the island of Malta midway in it, Cyprus in the Levant, and an important interest in Egypt. Britain and France divide the administration of Syria.

4. *Political Importance.* Many parts of the Mediterranean lands are rich and beautiful in themselves, fit to be the homes of powerful peoples ; but that is not the only reason for their importance, and for the importance of the sea. It is not the reason, for example, why Britain holds the territories we find her holding in this region. The reason for that is found in the immense importance of routes along and across the sea. You must cross it to pass from southern Europe to Africa. You must sail along it to pass from the Atlantic, or from its own western parts, in order to reach the lands round the Black Sea, Asia, and the Far East. For at the north-east corner of the Aegean Sea the strait of the Darda-

nelles opens out into the Sea of Marmora, and from this the strait of the Bosphorus leads into the Black Sea, which gives access to the rich wheat lands of Rumania, the Ukraine, and Russia, and to the ports for the oil-fields of Rumania and the Caucasus region.

At the south-east corner of the Mediterranean, the isthmus of Suez, which joins Asia to Africa, is crossed by the Suez Canal, which lets big ships pass from the Mediterranean to the Red Sea ; and thence to the Indian Ocean for India, China, Japan, Australia, and other distant lands. And the shores of the Mediterranean, especially on the European side, are reached by a series of important natural land routes. (See § 10.)

Such, then, are the chief geographical factors which make for the present importance of the Mediterranean Sea. In order to consider them further, we must first try to construct a map of it.

5. *The Map*), The sea lies, roughly, between the meridians of 5° W and 36° E. long., and between the parallels of 45° and 30° N. lat. The meridian of Greenwich (0°) cuts the Mediterranean coast of Spain about the middle. For the purpose of getting a general idea of the map into (what is called) the mind's eye, it is worth remembering that the odd numbered meridians and the even numbered parallels are much more useful than the others. The most useful parallel is that of 36° N. In the west, it runs through the Strait of Gibraltar. It cuts across the north part of Algeria and Tunis. At the centre, Malta lies just south of it. Farther east, it passes between Greece and Crete, cuts the island of Rhodes, and just touches the south coast of Asia Minor. Thus, while the western half of the sea lies almost wholly north of this parallel, the eastern (not counting the Adriatic or the Aegean) lies mostly south of it. We find the northernmost extremity (the head of

the Adriatic) nearly reaching 46° N. The southernmost (Gulf of Sidra) nearly reaches 30° N. Of the intervening even-numbered parallels: 44° N. runs north of the Pyrenees, and cuts the Gulf of Genoa, and the lower course of the Danube. 42° N. cuts Corsica, and runs just north of Rome, the 'Spur' on the east coast of Italy, and the town of Adrianople. 40° N. runs near Madrid, through Minorca (the northernmost Balearic island) and Sardinia, cuts off the toe and the tip of the heel of Italy and the two southern points of the peninsula of Chalcidice where they jut into the Aegean, and marks the entrance to the strait of the Dardanelles. 38° N. cuts through the north of Sicily, and across the Peloponnese, the southern peninsula of Greece. For meridian points we may take these: The strait of Gibraltar is between 5° and 6° W. Madrid is between 3° and 4° W. 3° E. marks the eastern end of the Pyrenees, Majorca (the middle Balearic island), and Algiers. 5° E. marks the valley of the Rhone, with Marseilles east of its mouth. 9° E. gives us Genoa, and the long axis of the islands of Corsica and Sardinia. 13° E. gives the head of the Adriatic: Rome is between 12° and 13° E. 15° E. marks Mount Etna in Sicily. 19° E. marks the Strait of Otranto (the entrance to the Adriatic Sea), and the head of the Gulf of Sidra. 23° E. runs close to Salonica, at the north-west corner of the Aegean Sea, the southernmost point of Greece, and the westernmost of the island of Crete. 26° E. (an even number this time) fixes the entrance to the Dardanelles and the east of Crete. 29° E. places Constantinople, on the Bosphorus. The Suez Canal runs between 32° and 33° E.; the island of Cyprus is cut by 33° E. Lastly, here is a small help to the memory: we began with the parallel of 36° N., and we end with the meridian of 36° E., which just cuts the easternmost bit of the Mediterranean, in the Gulf of Alexandretta.

6. *Time.* The Mediterranean Sea has a sufficient extent from west to east to make a difference of two hours in standard time between the countries in the west and in the east. By the sun it would be more, for at noon on the meridian of Greenwich it is 1 p.m. (one hour after noon) at 15° E. of Greenwich, and 2 p.m. at 30° E. But for convenience most countries adopt a

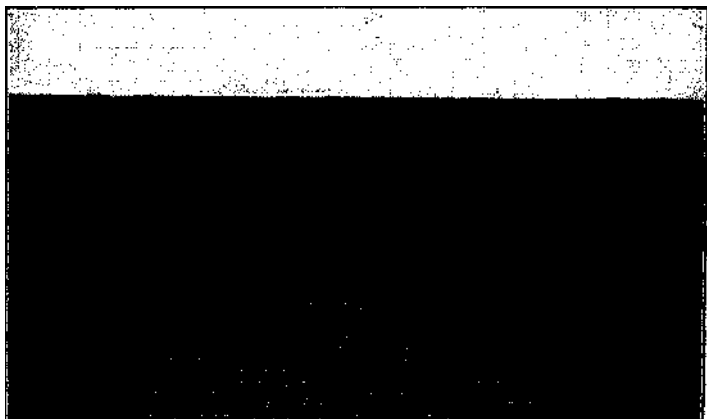


11. The northern mountain barrier (Alps at Coitina ; winter)

standard time as near as they can to this. Thus Portugal, Spain, France, and Algeria use Greenwich time. In Italy, Tunis, and Yugoslavia, clocks are set by 'Central European' time, one hour fast of Greenwich, and in Greece, Bulgaria, Turkey, and Egypt, 'Eastern European' time, two hours ahead of Greenwich, is used.

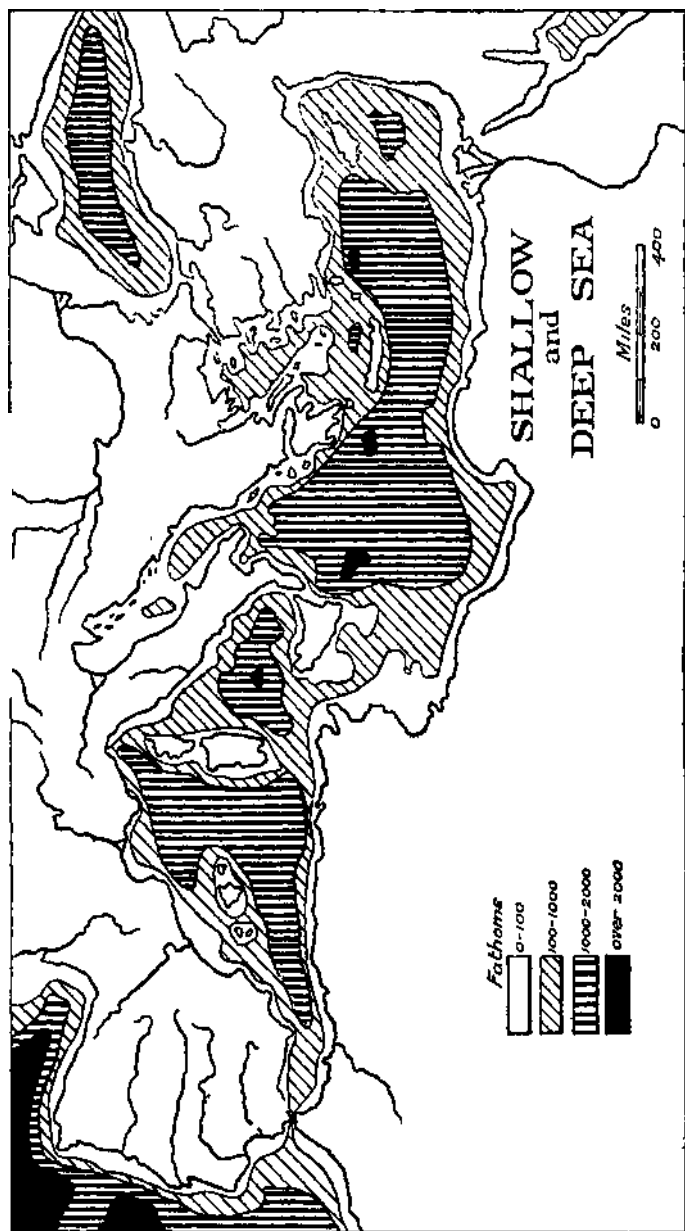
7. *Relief.* The Mediterranean Sea is almost surrounded, and its divisions are marked off, except in the south-east, by mountains and highlands. The two main

basins into which the sea is divided are separated by a broad ridge on which stands the island of Sicily, and the strait between that island and Africa is less than 200 fathoms deep everywhere. The deepest part of the western basin, however, is just over 2,000 fathoms (12,000 feet) ; and that of the eastern, 2,200 fathoms. The western basin is marked off by the high plateau of the Iberian Peninsula (Spain), from which rise the

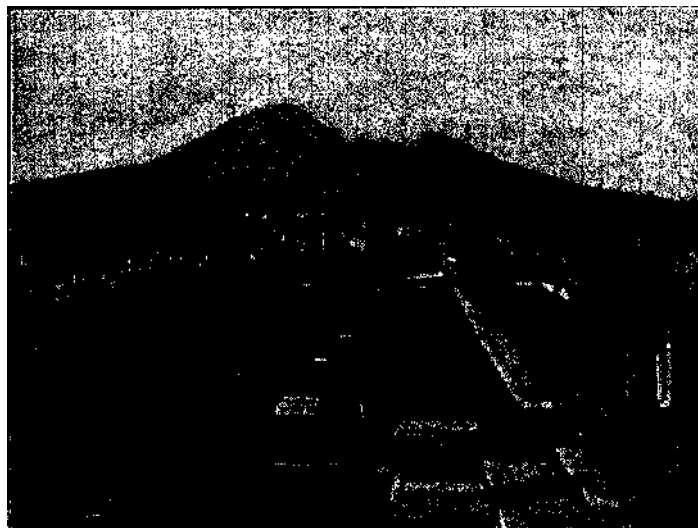


III. The southern desert barrier (the Sahara ; a *wadi* marked by low vegetation)

peaks of the Sierra Nevada in the south (11,700 ft.), the eastern end of the Pyrenees, the plateau of the Cevennes in France, the Maritime Alps in France and Italy, the Apennines in Italy, Sicily, and the Atlas mountains of north-west Africa. The shallow Adriatic Sea fills the trough between the Apennines and the Dinaric highlands, and from its head extends an important lowland, the basin of the river Po, between



the Alps and the Apennines in Italy. The Aegean Sea, also relatively shallow, is marked off by the mountains of Greece on the west, those of Rhodope (Despoto Dagh) on the north, the plateau of Asia Minor on the east, and the islands of Rhodes, Carpathos, and Crete on the south. The eastern Mediterranean basin is defined by these

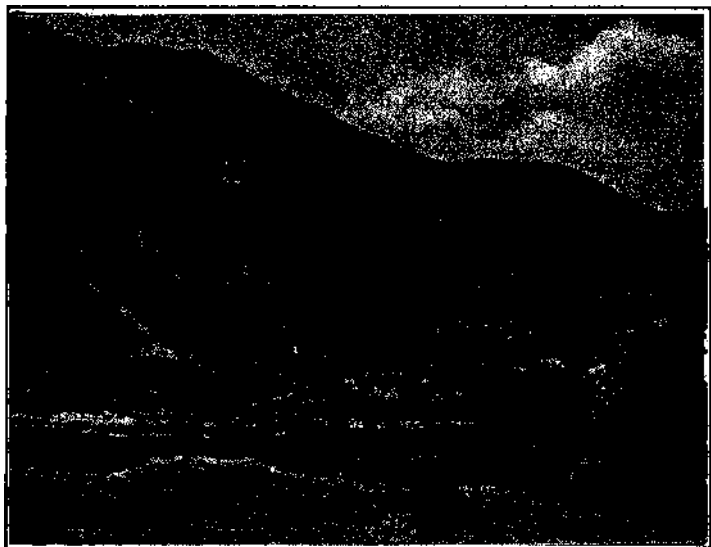


IV. Mount Vesuvius : Roman ruins in foreground (Pompeii)

islands and the Taurus mountains of Asia Minor, and by Lebanon and other Syrian heights on the east. The European and Asiatic mountains bordering the sea run up to highest points between 9,000 and 10,000 feet ; the Atlas ranges behind the coasts of Morocco, Algeria, and Tunis are not much lower. Only on the south, in north-east Africa, there is no high land close to the sea.

8. *Structure.* The principal mountain systems which border the Mediterranean area on the north—the Alps and Balkan systems, to which are to be added the

Carpathians and the Caucasus—were uplifted by folding, mainly in the geological periods known as the Miocene and Pliocene. With the movements which produced the uplifting were connected great volcanic eruptions. There are still active volcanoes on the eastern edge of the western Mediterranean area—Vesuvius near Naples in Italy, the island of Stromboli, between Italy

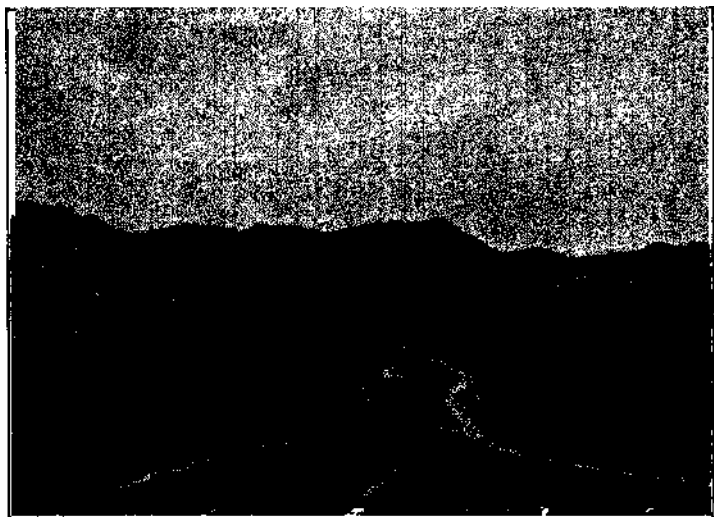


V. Typical karst-type country (Njegos, Montenegro)

and Sicily, and Etna in Sicily itself: here is a line of weakness in the earth's crust, indicated also by earthquakes, of which there have been many, some very destructive, especially in southern Italy. Some of the Aegean islands represent old volcanoes, and there are other traces of volcanic activity, such as hot springs in western Asia Minor, the eastern Atlas, and several other parts.

Limestone highlands and mountains are an exceedingly

important feature of the Mediterranean, especially its eastern part. They appear in parts of the eastern and northern plateau-edge of Spain, in parts of the central Apennines and the south-eastern division of Italy, along the east side of the Adriatic Sea and right through the Greek Peninsula, in southern Asia Minor, and parts of Syria and north Africa. The Karst district, north-east



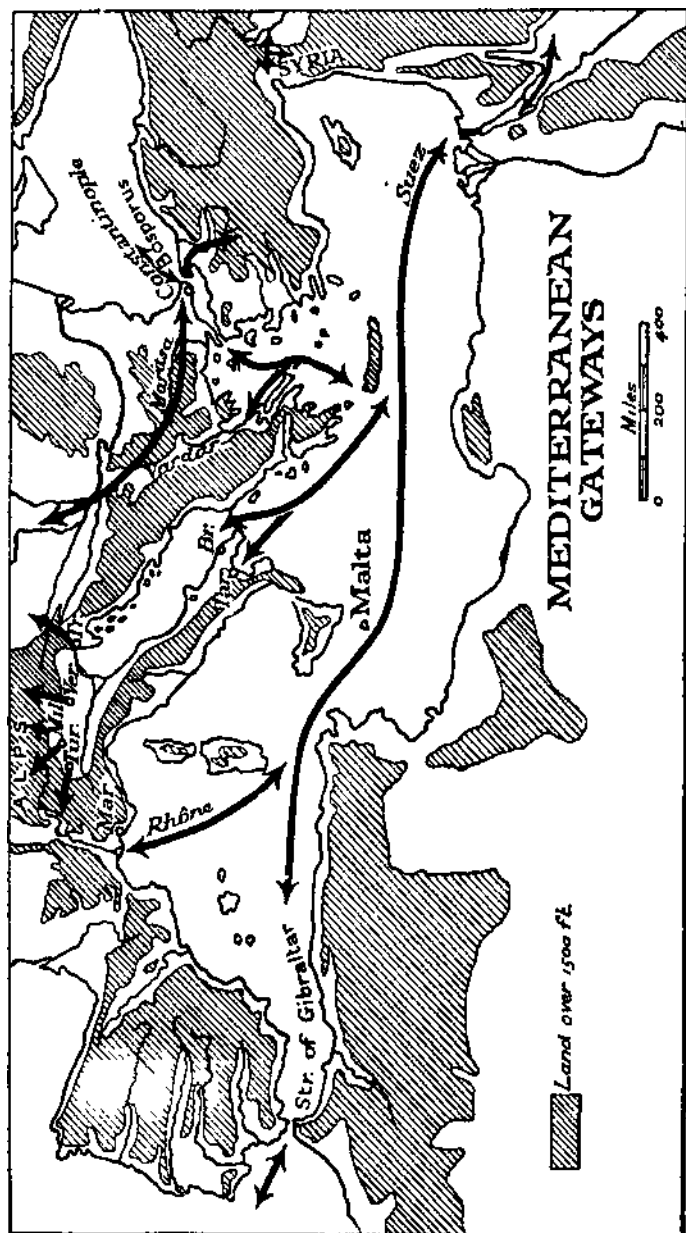
VI. Cultivated basin in limestone (Montenegro)

of the Adriatic, gives its name to certain features of these limestone areas wherever found. The limestone is porous and water sinks through it easily : its surface is therefore mainly dry, and pitted with holes, so that a view, for example, over the uplands east of the Dalmatian coast suggests a gigantic petrified sponge, especially as the usual colour is a light yellowish brown. Against this surface-colour the scanty natural vegetation of shrubs and occasional trees stand out almost black to the eye.

The typical limestone mountains are steep-sided, often breaking off into sheer cliffs, or scored by deep gullies and gorges : they are thus serious obstacles to communication. They are generally bare and stony, and little soil is found, except in holes and depressions of basin-shape, where cultivation may be carried on. Water, sinking through the limestone, often forms underground streams, which may issue in such basins, or in springs at the base of the hills where they rest upon less porous rocks. These springs sometimes appear as full-flowing rivers from caverns, and have an important influence upon the position of villages and towns.

9. *Coasts.* The presence of so much high land near the sea suggests that much of the coast will be high and steep, and so it is ; but there are several different types of coast. The Spanish and French coasts are generally bold, often cliffy; but there are low coastal tracts about the mouth of the Ebro in Spain, and the Rhone delta in France. Some parts of the west coast of Italy are low and shelving, except where high capes jut out; but other parts, including the whole of the Riviera, French and Italian, are steep, and broken only by little sandy bays, which are characteristic, too, of the high African shores of the western Mediterranean. The west (Italian) coast of the Adriatic is mostly low, and in the north, where it is backed, as we saw, by the plain of the Po basin, it is broken by creeks and river distributaries, which bring down silt to build up soft banks in a very shallow sea; some of these banks enclose lagoons, and within them is one of the most wonderful city sites in the world—Venice, which we shall come later to consider. A great part of the Italian Adriatic coast, however, is backed by mountains parallel to and immediately behind it, and so is the east coast of the Adriatic ; yet the two are very different. The Italian coast is unbroken

and unsheltered, with shallow water. The east coast is entirely different: under the Dinaric Mountains there are steep shores and deep water close inshore, and off much of this coast a sunken ridge forms a chain of high islands, which protect the waterways between them and the mainland. There is a narrow coastal lowland fronting the heights of Albania, just as there are such lowlands at intervals along the north Aegean seaboard ; but the indented coasts of Greece and western Asia Minor give access to valleys at the head of the inlets. Here the mountains do not generally run parallel to the shore, but (roughly) at right angles to it, and the sea penetrates the lower parts of the valleys between them. The east-facing coast of Tunisia may be compared. The coasts of southern Asia Minor and northern Syria are in great part steep and high. But the south-eastern shores of the Mediterranean are sandy and low, and about the mouth of the river Nile, near the south-east corner, we again find river-built mud banks and lagoons. These great Mediterranean deltas, those of the Nile, the Po, and the Rhone, are formed by the rivers which carry down much alluvium and deposit it where the tides and waves (the Mediterranean being an enclosed sea) are not strong enough to carry it all away. Somewhat similar formations on a smaller scale will be found where rivers of considerable size enter sheltered gulfs, as for example, where the Vardar enters the Gulf of Salonica at the north-west corner of the Aegean Sea. Such rivers and their valleys may be important as lines of communication or for human settlement or both, but the river mouths, being shallow, with bars of sediment, are not suitable for ports, so that these are commonly placed at one side of the deltas—examples are found in the position of Marseilles in relation to the Rhone delta, Alexandria to the Nile, and Salonica to the Vardar.



10. *Gateways of the Mediterranean.* These high coasts form barriers to communication between sea and land. And behind the low shores of the south-east there is another kind of barrier—desert: part of the vast desert of North Africa. These conditions suggest that the natural routes for communication with and through the Mediterranean region will be few and exceedingly-important; and so they are. We shall look at the chief of them now: there are others, as will appear later, but the great bulk of traffic follows these:

(1) and (2) The sea-gates which have been mentioned already: the Strait of Gibraltar from the Atlantic, and the Dardanelles-Marmora-Bosporus entrance to the Black Sea. To these may be added—

(3) The Suez Canal, from the Mediterranean to the Red Sea, although it is, of course, not a 'natural' route.

Then come the land routes:

(4) The Rhone Valley in France, with the port of Marseilles at its outlet.

(5) The routes through the Alps. Those followed by-railways are—

(a) the Mont Cenis route from France,

(b) the Simplon route, and

(c) the St. Gotthard route, from Switzerland,

(d) the Brenner route from Germany,

(e) the Semmering route from Austria.

All these descend upon the northern plain of Italy, (a) to Turin, (b) and (c) to Milan, (d) to Verona; (e) leads to the port of Trieste at the head of the Adriatic. From Turin a line runs across the pass between the Alps and the Apennines and descends to the Italian port of Genoa, whence there is a route along the western side of Italy to Rome, Naples, and the southern port of Taranto. From the northern plain there is a route along the

eastern side of Italy to the port of Brindisi. Both Taranto and Brindisi are European ports of call for ships from England to the East by the Suez Canal, which pick up passengers and mails which have been carried by rail across Europe to the south of Italy in less time (by eight days from England) than the steamers take. We may contrast the position of Genoa and Trieste with that of Taranto and Brindisi: ship transport is cheaper for goods than rail transport, and therefore the two first, as commercial ports, are placed where goods may be carried by sea as far as possible ; but rail transport is quicker than ship transport for passengers and mails; therefore Taranto and Brindisi, as passenger and mail ports, are placed at the seaward end of the Italian peninsula.

(6) A route from Central Europe crosses the Danube at Belgrade, and follows the valleys of the Morava and Vardar south through Serbia (part of Yugoslavia) to Salonica, the Greek port at the north-west corner of the Aegean, whence a railway continues south through Greece (Athens, &c).

(7) From Route 6 a branch runs east from Nish through Bulgaria and by the Maritsa valley to Constantinople on the Bosphorus:

(8) Syria, including Palestine, is compared to a bridge joining Africa and Asia Minor, between the Mediterranean Sea on the west and the Syrian desert on the east. And through northern Syria the easiest access is afforded between the Mediterranean and the Euphrates-Tigris basin (Mesopotamia, § 152).

(9) The Nile gives access to Egypt and the African lands beyond it. For the rest,* the desert of the Sahara blocks the way for a through route south from the Mediterranean and North Africa, except for caravans (though specially-fitted motor-cars, have crossed it).

In summary then, the first and principal Mediterranean routes to grasp are those of the sea-gates, Rhone, Morava-Vardar, Maritsa, Syria, Nile.

The status, and position of Mediterranean ports may be studied with advantage as an exercise. We have already found examples of big commercial ports and passenger ports, grown important in the service not only of Mediterranean lands, but of lands beyond the Mediterranean. Then there are the ports—very many of them—whose trade is mostly that of their immediate hinterland. Upon the richness and importance of the hinterland depends the volume of trade at the port and (to a large extent) the size of the town; and these ports range from the calling place for big steamers and the railway-terminus from the interior down to the tiny landing-place for small coasting-boats and fishing craft. Lastly there are the naval stations for the existence of which reasons have been given in § 4. So far as their naval importance is concerned, they are placed with reference not to the richness of their hinterland or to the existence of good land-routes leading to them, but to the seaways which they guard. Thus British Gibraltar guards its strait, Malta the narrow sea between Sicily and Africa; Gibraltar a peninsula, Malta an island, are natural positions for naval ports. The French naval station of Toulon guards the seaways leading to the great neighbouring port of Marseilles: Bizerta in Tunis is the French guard-post of the Sicily-Africa passage and of the southern end of the trans-Mediterranean route between France and her North African territories.—The west-Italian naval port of Spezia stands in relation to the commercial port of Genoa as Toulon to Marseilles.

II

CLIMATE AND VEGETATION

11. *The Mediterranean Climate.* There is a certain type of climate which is called the Mediterranean type, because its characteristics are most clearly marked in the Mediterranean region. The chief characteristics of this type are—Summers hot and dry ; winters mild and wet. These conditions do not occur over the whole of the lands surrounding the Mediterranean Sea. The high land which so closely hems in most of the coast lands of the Mediterranean helps to mark off the strictly Mediterranean type of climate from others, and thus limits that type to more or less narrow belts on the mainland, and to the islands.

12. *Pressure and Winds.* So far as it extends, this Mediterranean climate differs in important respects from those of western and central Europe on the one hand, and that of the Sahara desert region on the other : these differences, and the general nature of the climate, we shall find to have important effects upon mankind in the Mediterranean region ; and all this is due largely to the Mediterranean Sea itself. Thus : i

In summer an anticyclone or area of high atmospheric pressure tends to expand over the Mediterranean Sea and region from the Atlantic Ocean to the west of it. South of this anticyclone lies a tropical belt of low pressure, and the movement of the air from the one to the other causes northerly winds to prevail generally over the region, although the daily alternation of land and sea breezes, common during the heat of summer, may tend to hide the general movement from the north." These northerly winds belong to the system of the north-

east trades : they are dry, and would be hot as the winds of the Sahara are if it were not for the cooling influence of the sea. Everywhere in the region the temperature increases away from the sea, unless at the highest elevations. In summer all the Mediterranean lands are dry and parched ; rain is rare ; sunshine almost constant during the day.

13. In winter the sea preserves its warmth longer than the land, and there is a belt of low pressure above it, between areas of high pressure over central Europe on the one hand and north Africa on the other. A succession of cyclones (depressions or lows) then pass along the length of the sea. The general movement of the air is toward the low pressure belt from those of high pressure on either hand, and thus, broadly speaking, we still find winds from some northerly point in winter in the north of the Mediterranean region, but from a westerly or southerly point in the south.

14. *Named Winds.* The Mediterranean region is on the whole rather subject to high winds accompanied by particular kinds of weather, and from this it follows that there are a number of local names for particular winds. Thus a very strong cold northerly wind which sometimes sweeps down from the mountains over the northern coast lands of the western Mediterranean is called the *mistral* or 'masterful', or in the Adriatic the *bora* (from Boreas, the classical north wind). The northerlies of summer are the Greek Etesian winds and the Turkish *Meltemi*. The *sirocco* or *scirocco* is a familiar name applied to two types of southerly wind ; the one dry as the name implies, which brings extreme heat, drought, and dust (most probably from the Sahara) to Sicily in summer ; the other a winter wind, which, blowing from the dry Sahara, becomes moist as it crosses the sea and brings muggy weather to Southern Italy and the

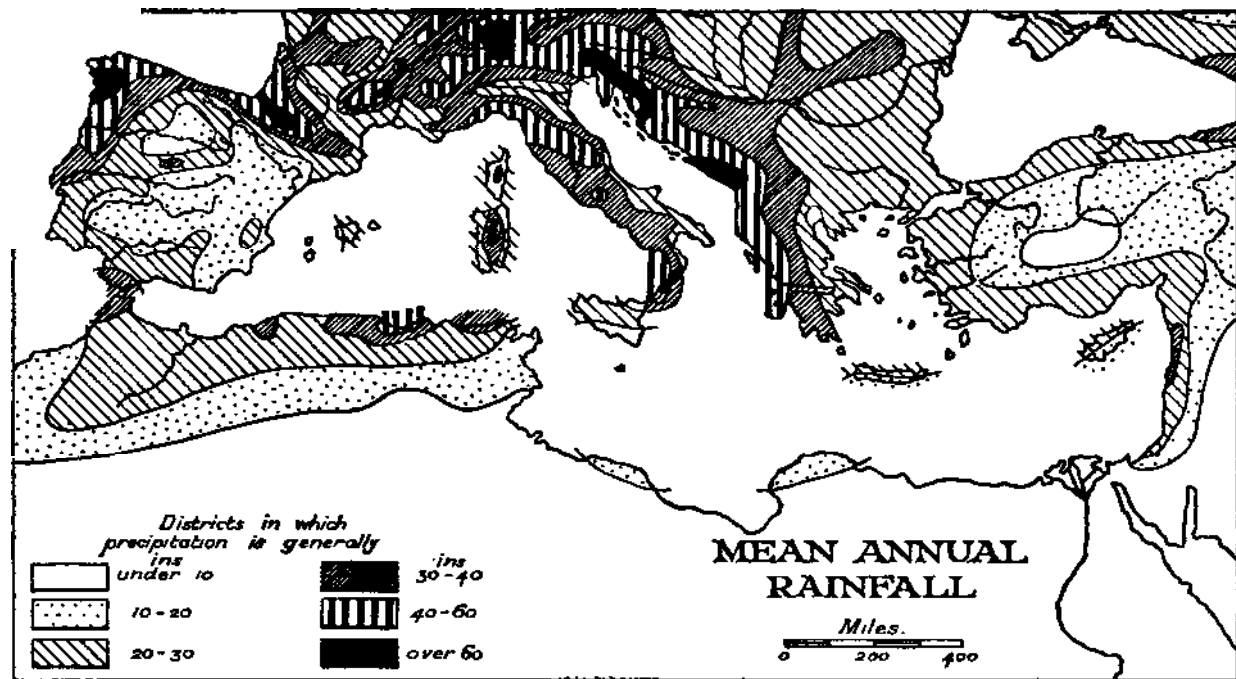


FIG. 3

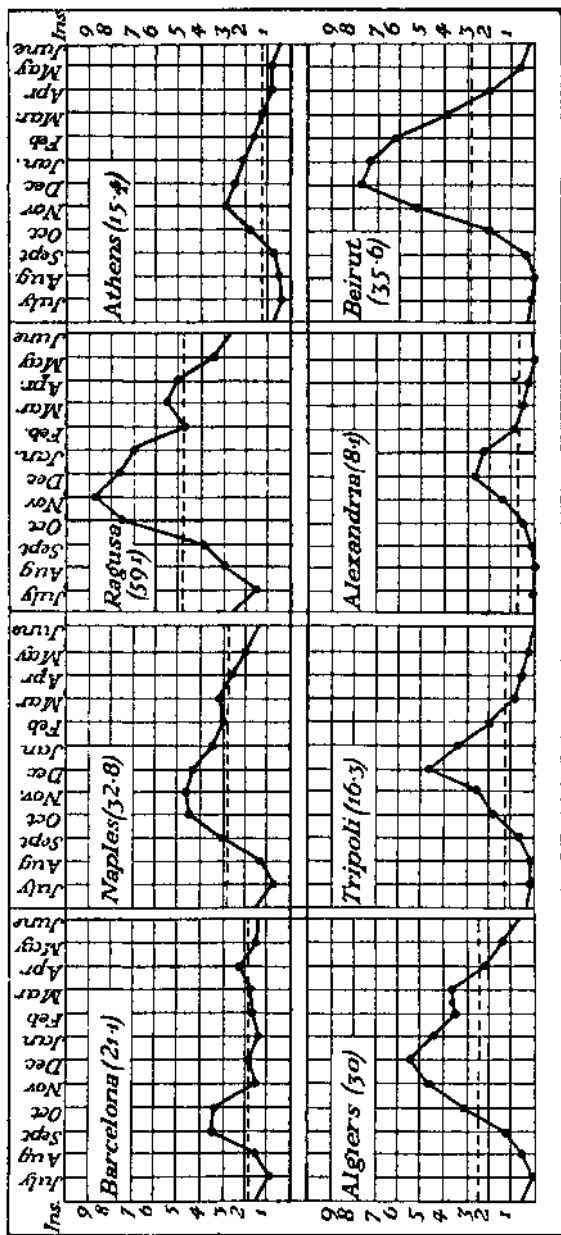


FIG. 4. Curves of mean monthly rainfall. The broken lines mark the mean annual rainfall

Adriatic. The *tramontana*, a bracing north wind from ' over the mountains ' (as its name signifies) may follow it. There are other local wind-names, but the above are the most commonly met with.

15. *Temperature.* As far as the European Mediterranean coastlands are concerned, we find generally hotter summers but cooler winters in the east of the region than in the west, and warmer winters on the west coasts of the peninsulas than on the east; all of which accords with the general tendency of the large expanses of sea to the west to moderate the extremes of climate. Lisbon has a mean temperature eleven degrees lower than Athens (70° and 81° F. respectively) in the hottest month, August; but a mean two degrees higher (49° and 47°) in the coldest month, January. At Alexandria (Egypt) the summer temperature is about that of Athens, the sea moderating the desert heat of the near interior ; but the January mean temperature is 10° higher. Frost may occur in winter on any north Mediterranean coast, and the winter temperatures decrease very quickly as the mountains behind the coasts are ascended. Some parts of the Mediterranean lands are famous as winter resorts for visitors from lands farther north where the winter is colder or rougher*. Such are the sheltered northern coast of the western Mediterranean in France and Italy, known as the Riviera, and the warm southern lands, Algeria and Egypt.

16. *Rainfall.* The amount of rainfall differs greatly. The heaviest known rainfall in Europe is recorded on the westward-facing coast of the Adriatic, near Cattaro, averaging 188 inches in a year. The southern part of the east-facing coast of Spain averages only 10 inches. Along the African coast rainfall generally decreases from west to east—thus, 80 inches at Algiers, 16 at Tripoli, 8 at

Climate, and Vegetation 31

Alexandria, 3 at Port Said. It will be important to remember such differences as these when we study each of the Mediterranean lands in turn. Nor is the heaviest rainfall at the same time of year in all parts. As we have seen, winter is broadly speaking the wet season; but over large districts, especially in the western Mediterranean, there is a heavy rainfall in autumn or early winter, less in midwinter, more again in late winter or spring. Elsewhere, the rainfall is greater in midwinter. The curves of monthly rainfall shown here give some examples of these differences.

17. *Distribution of Climatic Conditions.* The distribution of the true Mediterranean type of climate, and the chief variations from it, are as follows. The climate of a narrow belt along the east coast of the Iberian Peninsula (in Spain) is true to type; and so is that of the greater part of Portugal, subject to the fact that the Atlantic Ocean moderates the climate, especially in the direction of cooling in summer. But the north coast of the peninsula has the west European type of climate, with equable temperature (no great extremes of summer heat or winter cold) and rain at all seasons. The high central plateau, however, is of sufficient extent to have a type of climate something like the interior of the northern continents, with a great range of temperature between the hot arid summer and the cold winter, and the principal rainfall in spring. (Compare Madrid in the examples on p. 34, and see further §48.) Its prevailing winds are of monsoon type, blowing outward from the plateau in winter, and drawing inward in summer.

18. The Mediterranean type of climate extends over the southern coastlands of France and most of the Italian coasts. It also covers the beautiful district of the Italian lakes on the lower southern slopes of the Alps. But it does not appear over the low plain of the

Po in northern Italy. Here the climate is more like that of central Europe. Rain falls in any season, and summer may even be wetter than winter. Winter "is very cold : there takes place what is called an inversion of temperature, so that it is often colder on the low plain than in the lake district higher up, the cold air sinking to the bottom of the basin which is formed by the plain and surrounding mountains. (Compare Lugano and Milan in the examples on p. 34.) To the south over much of the Apennine mountain system of Central Italy there are also climatic conditions like those of central Europe, although the heavier winter rains typical of the Mediterranean region are found here. (See further § 87.)

19. In the Balkan peninsula similar conditions are met. The typical Mediterranean climate favours the west (Adriatic) coast, most of the Greek peninsula, and the north coast of the Aegean, although the winters of the two last are rather colder than those of the general Mediterranean type. (Compare Ragusa and Athens in the examples on p. 34.) But the whole interior of the Balkan lands behind the fringing mountains, nearly as far south as the Gulf of Corinth, has the central European climate, with some rain at all seasons and very cold winters (compare Sofia in examples, p. 34). In eastern Bulgaria and the country about the Bosphorus a climate intermediate between the true Mediterranean and that of the steppes of south-eastern Europe is found.

20. Asia Minor receives heavy rain at all seasons on the north coast; much of the interior, on the contrary, has a scanty rainfall in spring only, and is dry at other times. The Mediterranean type of climate, however, is found on the west and south coasts, and also along that of Syria, until the south-east corner of the sea is reached.¹

¹ In the examples on p. 34, Trebizond is on the north coast, Afium Kara Hisar in the interior, and Adana on the south coast, of Asia Minor.

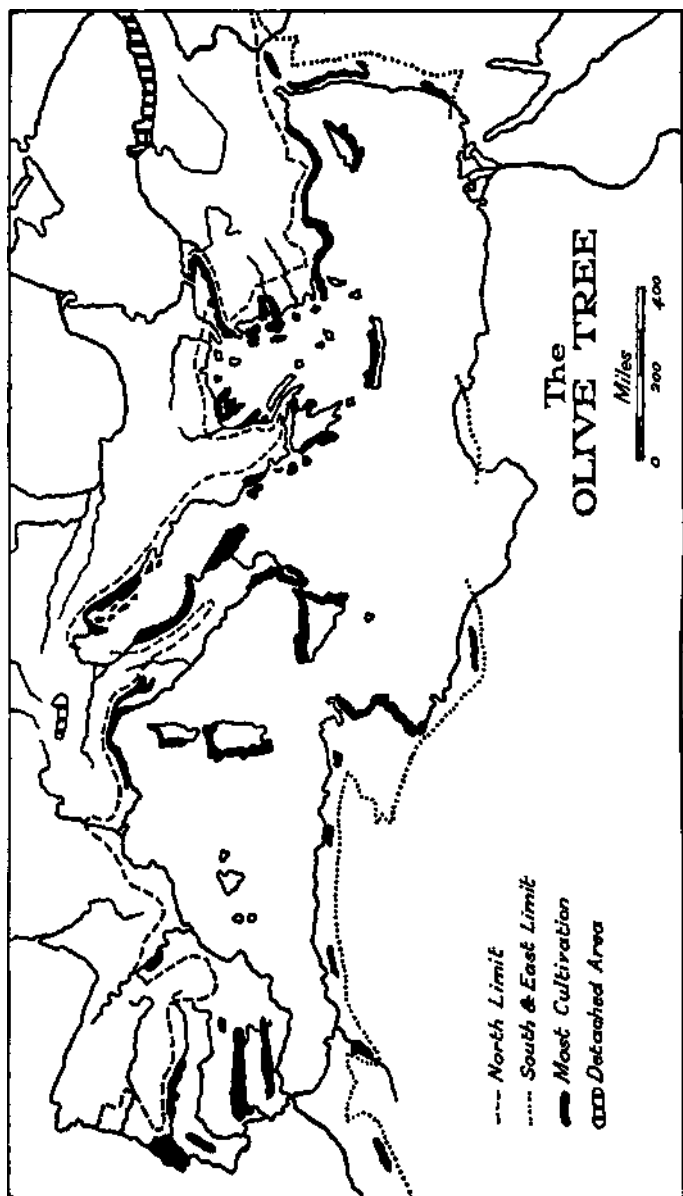
Here no mountains intervene between sea and desert, and Egypt has a hot and extremely dry climate : the sed influences the temperature of the coast, and to some extent the rainfall, but even on the coast Port Said has an average of only 3 inches of rain per year, and Alexandria only 8 inches. Cairo, farther inland, but at no great distance, is almost rainless (annual average, 1 inch). Similar conditions prevail in Tripoli, but with more rain (in winter and spring) on the coast, and on the north foreland of the Atlas mountains in Tunis, Algeria, and Morocco we find the true Mediterranean type of climate again along the coastal belt, marked off from the arid or desert conditions to the south by the mountains. (Compare Algiers on the coast and Biskra on the edge of the desert in examples, p. 34.) Finally, the west coast of Morocco, facing the Atlantic, has a peculiar climate, with small rainfall, lying as it does under the lee of the desert and the Atlas mountains, but with less summer heat than might be expected because the coast is washed by a cool Atlantic current known as the Canaries current.

Special features of the Mediterranean climate are the large amount of sunshine and the clear air which (apart from such temporary occurrences as dust-haze with high winds) adds much to the beauty and vivid colouring of the scenery. The rainfall, too, is not only confined fairly definitely to a particular season, but also occurs within few days, and even few hours, as compared with the length of time during which rain falls under the west-European conditions of climate. Thus the Mediterranean rainfall is commonly very heavy for short periods, instead of being slight for long periods. One consequence is that water courses, which may be dry or nearly so for most of the year, are sometimes subject to sudden high floods, and this has greatly influenced **the** erosion of the land-surface in many parts.

EXAMPLES OF AVERAGE TEMPERATURE AND RAINFALL

	<i>Height above Sea-level. Feet.</i>	<i>Mean Temperature, °F.</i>				<i>Mean Rainfall, Inches.</i>	
		<i>Coldest Month.</i>	<i>Hottest Month.</i>		<i>Annual .</i>	<i>Wettest Month.</i>	
Lisbon	66	Jan. 49-3	Aug. 70-2		28-7	Dec.	40,
Madrid	2,149	Jan. 39-7	July 75-7		160	Apr. Nov.	
Barcelona	131	Jan. 46-4	July 73-9		211	Sept.	3-4
Nice .	66	Jan. 46-4	July 73-8		33-7	Oct.	6-3
Lugano	902	Jan. 34-4	July 70-7		66-9	Oct.	8-2
Milan	482	Jan. 32-4	July 74-8		39-7	Oct.	4-7
Palermo	230	Jan. 50-5	Aug. 76-6		29-8	Dec.	4-5
Ragusa	49	Jan. 47-7	July 77-0		59-1	Nov.	8-1
Athens	351	Jan. 47-5	July 81-1		15-4	Nov.	2-9
Sofia .	1,804	Jan. 26-6	July 69-3		25-5	May	3-4
Trebizond	98	Jan. 43-3	Aug. 73-9		34-4	Dec.	4-88
Afiun Kara Hisar	3,300	Jan. 32-7	July 08 9		17-6	Nov.	307
Adana	66	Jan. 50-0	July 83-8		240	Dec.	4-96
Jerusalem	2,200	Jan. 44-4			24-77	Jan.	6-26
Alexandria	105	Jan. 57-5	Aug. 80-5		81	Dec.	2-6
Algiers	62	Jan. 53-4	Aug. 77-5		300	Dec.	5-4
Biskra	410	Jan. 51-1	July 89-4		6-9	Apr.	1-2

21. Vegetation. Under the typical Mediterranean climate there flourishes a typical Mediterranean vegetation. The very hot dry summer on the one hand, and, on the other, the cold of winter, cut short the period of rapid growth. The long periods of dryness, also, cause the plants to adapt themselves in various ways to keeping what moisture they get. Leaves are usually small, thick, and tough. Thorny plants are common, also resinous or oil-yielding plants, and plants growing from bulbs or tubers. All such characteristics are usual in climates which have long dry seasons. Trees generally grow rather low ; their evergreen leaves are commonly dark or of a dull, greyish hue : the cork and other evergreen oaks, various pines and firs, the cypress, cedar, and olive are examples. The olive is extensively grown for its oil-bearing fruit, and the map showing its distribution also illustrates pretty closely the lands where



the climate is of true Mediterranean type. Deciduous trees, such as oaks and planes, appear only where there is sufficient moisture throughout the year.

22. The woodlands of the Mediterranean region do not at all resemble either the bright green deciduous forests as in western Europe, or those of tropical lands, with their dense network of creepers. There are, indeed, no creepers, but there is often a rich growth of shrubs and bushes, some of which we recognize as ornamental garden shrubs at home. They include the laurels, *laurustinus*, oleander, myrtle, rosemary, dwarf oaks, dwarf palms, and many other forms. A dense scrubby growth, perhaps six to ten feet high, and sometimes difficult if not impossible to get through, is characteristic of waste land in many parts, and is known as *maquis* (French) or *macchia* (Italian). On dry limestone soils it grows lower and more scattered : this type is known in France as *garrigue* (§ 63). The woodland of Mediterranean type will be found on the hill-slopes up to a height between 2,500 and 3,000 feet: above that, there are more deciduous woods, among which oaks are prominent, and in some parts (of Spain and Italy for instance) the chestnut supplies an important food; the cedars for which Lebanon is famous also appear at high levels, as they do similarly on parts of the Taurus and Atlas mountains.

23. Outside the limits of Mediterranean conditions proper there are different characteristic vegetations to be noticed in different parts. The high plateau of Spain, for example, is dry and treeless. In the Ebro valley, and parts of the south-east coastlands and north Africa where there is a low rainfall but not absolute desert, a dry grass grows, called *esparto*, which is useful in commerce for paper-making, &c. On limestone tracts like the Karst (§ 8), where the surface is almost always dry, only scattered shrubs grow, except in the hollows, where soil

has collected. In the northern part of the Balkan peninsula, where the climate is transitional between the Mediterranean and the central or south-east European types, the vegetation is transitional too, and so, to the north of the Rhodope range, we find vegetation forms which are characteristic of the Mediterranean region, of central Europe, and of the steppes, while Alpine types appear at heights above 6,500 feet. The north coast of



VII. Maquis vegetation (Dalmatia)

Asia Minor has central European trees such as planes, horse-chestnuts, and walnuts, with oaks at higher levels. The western coast and valleys leading up from it, and the southern coast, have the Mediterranean vegetation; but this gives place inland to the treeless plateau, with little but scattered thorny shrubs; although a ground vegetation may spring up quickly with rain. In Egypt, and on either side of it, the desert fringes the coast, except where the river Nile irrigates the land. In Algeria and Morocco the valleys of the Tell are mostly

fertile. The olive, palms, and cork-oaks appear at the lowest levels, together with the undergrowth of typical *maquis* shrubs, and many fruits are grown. Higher up there are oak forests, with myrtle bushes, &c, and higher again, deciduous trees. The plateau of the shotts has a stony surface with tufts of esparto, and a grass called *drinn* on the salt dunes provides food for camels. Similar conditions are found along the southern edge of the Saharan Atlas, except where the oases support date-palms. Many trees and plants which are now important in the Mediterranean region have only been introduced there in historic times, such as oranges and lemons, and maize. It is not even certain that the olive and chestnut are natives of the region.

24. The Mediterranean lands are rich in cultivated plants, as we shall find when we come to consider their products. On the other hand, the destruction of forests by man has had bad results in many parts. In the course of ages vast forests, which formed the natural vegetation, have been destroyed in other parts of Europe too, but have given place to rich agricultural lands. In the Mediterranean lands, however, there are many tracts where, after the forests have disappeared, the impenetrable *maquis* has grown up ; or else the soil, unprotected by trees, has been washed away by heavy rains, and the land spoiled.

III

MAN

25. The Mediterranean region, divided as it is into a number of well-marked physical divisions, shows also a number of divisions among its inhabitants, with very different characteristics.

26. The Iberian peninsula—Spain and Portugal—is marked off physically to be the home of a people united in race, with the exception of the Basques, who live in the country bordering and inland from the south-east corner of the Bay of Biscay, on both sides of the Franco-Spanish boundary. These are an ancient people whose origin is unknown: their native language is unlike Spanish or French or any other in Europe, and is primitive in construction. They do not form a state of their own, but live under either Spanish or French rule. The position of this distinct people, driven long ago as far as they could get to the western coastlands, by others moving from the east, may be compared with that of the Bretons in north-western France, and the Celts of Wales and western Ireland. The Basques are proud of their ancient origin, and like the Bretons are line sailors and fishermen; they are also specially fond of athletics, and have peculiar games.

27. The Spanish and Portuguese, as has been said, are of one race, though languages differ considerably in different parts of the peninsula. Portuguese differs from Castilian, the true Spanish, but not so much as Catalan, the common language of the eastern coastlands. This is more closely connected with Provençal, the language of southern France, which is very different from the French which we know.

28. Even in Italy there is a distinction between the Italians of the Po basin—who in language and general character are influenced by the surrounding territories, especially France—and the Italians of the rest of Italy. The Balkan lands are much more divided: they do not form a physical unit, or even two or three well-marked units; therefore they are separated, as we have seen, into different States, and between several peoples, though the political division and the division

of peoples are not the same. The southern Slavs form the two States of Yugoslavia (that is the southern-Slav land) and Bulgaria. The Albanians, like the Basques a very ancient people, live in the mountainous country bordering the south-west part of the Adriatic, which is so difficult of access that they have kept their independence there, and some who have crossed the narrow seas to settle in little colonies in southern Italy or in Aegean islands have not lost their characteristics. Among the same mountains, but further south and east, the shepherd Vlachs (§ 119) have become separated and isolated from their relations the Rumanians who live almost wholly north of the Danube.

29. The Greeks inhabit their peninsula, and spread over the Aegean islands and along the north coast of that sea. But here there is much mixture of peoples, for that strip of coast forms a kind of highway east and west between the Rhodope mountains and the sea. There are Serbs, Bulgars and others, and lastly Turks. The Turks come from the east, for the mountainous Balkan lands were at least as easy of access from Asia Minor, across the narrow sea-straits, as from Central Europe or from Italy and the west. The Christian inhabitants of the Balkan lands do not all belong to the same Church, and the Turks brought in Mohammedanism. There is little wonder, with all this division, that the Balkan lands have been the scene of frequent wars.

30. The inhabitants of western Asia Minor are mainly Turks, with Greeks at various points along the coasts; for the Greeks have always been sailors and sea-traders, thanks to their indented coast with its many harbours, their difficult mountainous land behind, and their islands. In some parts of Asia Minor there is much mixture of population, as we shall find in

VIII. A typical Arab face

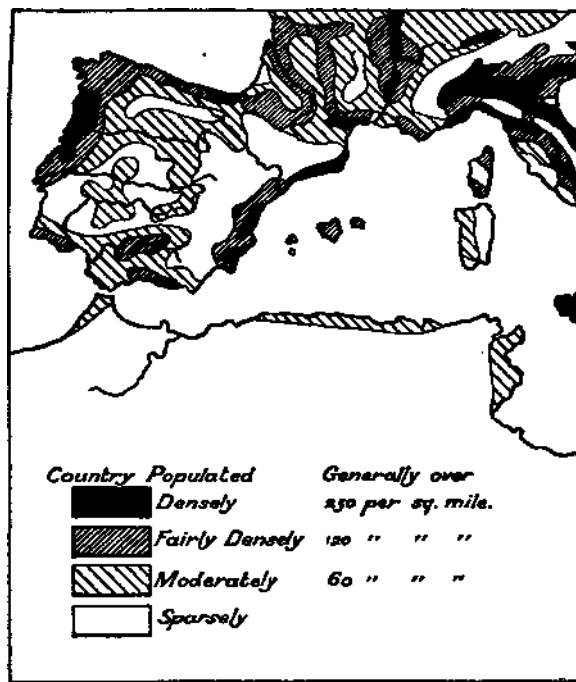


IX. A desert caravan

31. In Syria the Turk meets with the Arab, and here again there is a good deal of mixture of other inhabitants, for Syria, as we saw, is a bridge or passageway between sea to the west and desert to the east. The agricultural peasants of Egypt, called *fellahin*, are probably descended from those who have cultivated the rich soil of the Nile floods for thousands of years ; the Copts, who became the rulers of the *fellahin*, are mostly town-dwellers now. In Tunis, -Algeria, and Morocco, the settled cultivators and town-dwellers are mainly Berbers : in these countries and the Egyptian deserts the Arabs are wanderers, moving about to find pasture for their animals.

32. Not only in Syria, but throughout most of the trading centres, there are a good number of Jews. This sometimes has curious results, as for example at Salonika, the great Balkan port at the head of the Aegean, where many of the Jews, being of Spanish descent, speak that language ; and others, again, French, and these languages are so usual there that (for instance) newspapers are published in them. The African Jews are distinct from the rest, and probably preserve an early relationship with the Punic people of the period before the Roman conquest of Carthage.

33. *Areas of Dense Population.* The map of the distribution of population in the Mediterranean lands shows that the chief most densely inhabited districts, except in parts of Egypt along the Nile, are in the western Mediterranean entirely—along the northern part of the Portuguese coast and the eastern coast of Spain, in the Po basin of Italy and along both flanks of the Apennines, and in Sicily. The small island of Malta has also an exceptionally dense population. The occurrence of dense or scanty population is to a great extent connected with geographical conditions, as we shall



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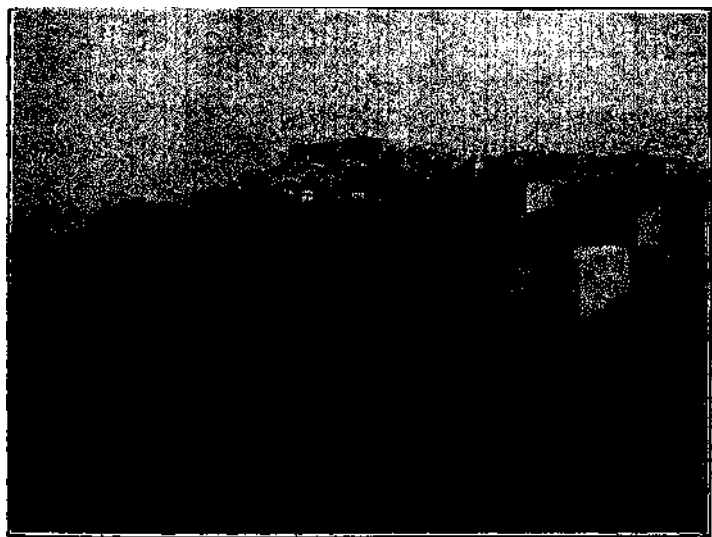
FIG, 6

easily see in reading of the various countries, depending upon the existence of sufficient or insufficient rainfall, fertile or unfertile soil, country easy of access or rugged and difficult, and so forth. In well-watered country the agricultural population will generally be found distributed in small villages. But in dry lands, such as the limestone districts described in § 8, or near the desert margins or in oases in the deserts, settlement tends to concentrate where water may be got from springs or wells, or if there are few of these, where it may be collected in reservoirs or cisterns, as in parts of Syria, the plateau of Asia Minor, and Greece. Such lands, except where these settlements occur, actually appear much more sparsely inhabited than would be suggested by saying that the population averages so many to the square mile. Sometimes the population of quite a large district may live in one village, where there is a good water-supply, or the position of which can be defended against an enemy, and the inhabitants have to go long distances to their fields or pastures.

There is much emigration from some Mediterranean lands—for instance, many Italians, Spaniards, Greeks, Syrians, and Maltese leave their native countries, either for a time, so as to earn more money than they can at home, or permanently. There may be political or economic reasons for this movement which have little or nothing to do with geography; but such adverse geographical conditions as we have mentioned also affect it; indeed, the population of some densely inhabited areas, such as Malta and Sicily, has out-grown the resources of these areas.

34. *Occupations.* The only part where there is a large manufacturing population to be compared at all with the much greater industrial districts of Germany, France, and Britain is in the Po basin of Italy; but

in other parts there is a very close agricultural population. The character of the agriculture differs according to 'physical conditions. In the flat lands of the Po basin many field crops are grown—wheat, maize, rice, and others—and irrigation from the rivers is important, but not quite so much so as in rainless Egypt, where for the field crops irrigation from the Nile is the only



X. Terrace cultivation, Patmos, Aegean Sea

source of life. In neither of these districts have we found what we have called the climate of true Mediterranean type. Where that type is found, and where there are not extensive lowlands like those of north Italy and Egypt, but instead narrow coastal belts backed by mountains, it is broadly true to say that plantations, not fields, are the more important features of Mediterranean agriculture—plantations, for example, of olives, figs, and vines. Cultivation on artificial terraces is frequently practised on the steep slopes.

35. The mountains bordering the Mediterranean are commonly from 5,000 to 7,000 feet high (we have seen that the highest seldom exceed 9,000-10,000 feet). 'At this common height they are apt to receive a heavier rainfall than the bordering lowlands, and from this and, the snow which collects on them in winter and melts in spring they supply streams and springs on their flanks. On the flanks, therefore, the principal plantations are found, and in the most favoured parts the agricultural populations settle ; densely, because there is on the mountain-flanks no great extent of land fit for settlement, as there might be in more level country. Such typical trees or plants as the olive, fig, and vine root deeply, as many Mediterranean plants do, so as to reach the moist subsoil in the dry summer season ; irrigation is thus not needed for them, and the most favoured places for their plantation depend (among other things) upon the richness of the subsoil. But for other plants irrigation is essential, as we shall find in the gardens or plantations of eastern Spain.

36. It is possible to make a very broad contrast between the wide grain-growing lands and the big forests of central Europe on the one hand, and the plantations which are so important a feature of Mediterranean lands on the other—grain and timber as against fruits.

37. The areas of dense population in the agricultural belts on the hill-slopes are mainly found at heights from 600 to 1,200 feet. The lower forelands are often unfertile, sometimes marshy, and they breed the mosquito which carries malaria to man. Human settlement above about 2,500 feet is uncommon, though villages may be found up to 3,500 feet or more, as on the southern slopes of the Sierra Nevada in Spain, where this elevation is about the upper limit of the

olive. Where the chestnut is an important food, there may be a line of relatively dense population at the height at which the olive ceases to flourish and the chestnut begins.

38. *Seasonal Movement of Flocks.* Where the summits of the hills are of sufficient extent to afford good pasture, there is a regular movement of the shepherds with their flocks between summer and winter. The mountain pastures are fresh in summer, when the lower lands are dry and parched ; the lowland pastures are good in the warm rainy winter when the mountains are snowy and cold. This movement may be noticed in many parts, as for example between the Andalusian plains of southern Spain and the mountains about them ; between the plain of the Campagna and the Apennines in western Italy ; between the coastlands and the hills of Dalmatia ; between the plain of Thessaly in Greece and the Pindus mountains to the west. We shall find examples to show that under Mediterranean conditions the cultivation of the land and the keeping of live stock do not go together as commonly as they do, for instance, in England ; but tend to be quite separate occupations of different people.

IV

THE IBERIAN PENINSULA

39. *Position.* The Iberian peninsula, which is divided between the states of Spain and Portugal, extends south from the Pyrenees mountains and the Bay of Biscay to the Straits of Gibraltar. It lies between 44° and 36° N. lat., and between 10° W. and

4° E. long. The meridian of Greenwich cuts the Pyrenees somewhat west of their centre, and also cuts the tip of Cape Nao, which is about midway on the east (OT Mediterranean) coast of the peninsula.

40. *The Map.* The Iberian peninsula may be represented in a diagram (as the foundation for a map) as a four-sided figure with the north and south coasts almost parallel and equal in length. The north coast extends from Cape Finisterre to the head of the Bay of Biscay near San Sebastian; the south, from Cape St. Vincent on the Atlantic to Cape Gata on the Mediterranean side. The west (Atlantic) coastline in our diagram may be drawn to form right angles with the north and south, and of the same length as each of these. The north coastline must be continued eastward, for about two-thirds of its own length, to mark the crest of the Pyrenees, and the line along which the peninsula is joined to the continent. The line of the east coast is drawn by connecting the remaining extremities of the north and south lines. The centre of the peninsula may be taken at the intersection of the meridian of 4° W. and the parallel of 40° N. : it is close to the city of Toledo, and Madrid, the capital, is only about 40 miles directly north-east by north of it.

41. *Relations with France and Africa.* The Pyrenees make a natural frontier between France and Spain, and the general direction of these and other mountain ranges in the peninsula is east and west. There is not, therefore, any easy line of land communication between the Iberian peninsula and the rest of Europe, and we do not find a much-used land-route from Europe passing through the peninsula to an Atlantic port, to connect with South Atlantic shipping, comparable to routes through Italy (§ 10) connecting with shipping for the East. Communication across the narrow Strait

of Gibraltar with Africa (Morocco) is easy, and there is some reason in the often-quoted French saying that Africa begins at the Pyrenees, although geographically it cannot be reckoned so. (Compare § 157.)

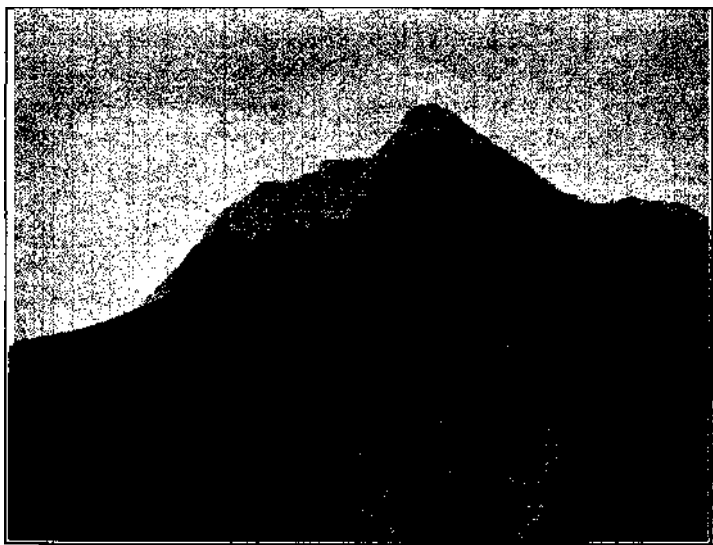
c 42. *Divisions.* For the political division between Spain and Portugal there might appear to be no geographical reason ; but there is some. For the most part; a tract of hard, unfertile, and sparsely populated country, through which rivers pass in deep gorges difficult for communications, forms a frontier belt through which the boundary runs, largely along low mountain-ranges and rivers. Estremadura is the former provincial name covering a large part of this border land both in Spain and in Portugal : a name probably of late Latin origin, meaning the 'extreme limits'—the far west, as viewed by the Roman invaders, to which access was difficult. The main divisions of the peninsula, according to the relief of the land, are six : (i) a high plateau, commonly called the Meseta, bounded on the north by (ii) the Cantabrian mountains and (hi) the Ebro valley which separates it from (iv) the Pyrenees. The plateau falls steeply eastward to the Mediterranean coast, with only small narrow coastal plains, if any at all, between it and the sea. On the south it is bordered by (v) a mountainous region in which the Sierra Nevada is the most prominent range ; and on the west by (vi) the lower hills and lowlands which make up the territory of Portugal.

43. *Provinces.* The old provinces of Spain have a close relation with the physical divisions, and their names remain in use, although the local government is now carried on in a larger number of smaller departments. In the north-west, Galicia covers the hill-country at the western end of the Cantabrian mountains, and its coastline is the angle round which the Bay of

Biscay sweeps eastward from the Atlantic Ocean. Asturias borders the bay and covers the western half of the Cantabrians themselves ; the Basque Province their eastern end ; between these, covering, with Leon, the north-western quarter of the central plateau, the province of Old Castile reaches across the mountains to the Biscay coast. Navarre, Aragon, and Catalonia lie across the Ebro valley, and include sections of the Pyrenees to the north and the plateau to the south. New Castile represents the south-central part of the plateau ; Estremadura its south-western slopes to the upper valleys of the Tagus and the Guadiana. Andalusia is the basin of the Guadalquivir, its lowland flanked by the heights of the Sierra Morena and the southern mountains ; but the Sierra Nevada and most of the southern mountain-system belong to Granada. Murcia and Valencia cover the eastern part of the plateau, and that part of the Mediterranean coast which borders it.

44. *Coast.* The coast of the peninsula is high, steep, and rocky in the north, with many little bays forming small harbours which are liable to be blocked by bars deposited by the rough waters of the Bay of Biscay. The north-west coast is still high, but broken by long narrow inlets of the form known as *rias*, which provide fine harbours. The Atlantic coast generally is rather subject to fogs, dangerous to shipping. The Portuguese part of this coast is in the main comparatively low, and so is that in the south-west. Great sand dunes line the shore, and may be compared with the Landes of south-western France. The coastal lowland, however, is narrow along the south coast of Portugal, where the hills of Algarve (the 'western land' of the Arabs crossing the narrow sea from Africa) rise not far behind, and end in the bold Cape St. Vincent, the south-western end of Europe. About the mouth of the Guadalquivir

there are unhealthy marshes. Then at the Strait of Gibraltar the high, steep rock of that name rises nobly, joined to the mainland only by a low isthmus ; and the rest of the southern Mediterranean coast is generally steep and difficult. North of Cartagena there is a narrow low coastal plain, broken by a big shallow lagoon called Mar Menor (the ' lesser sea '). North again, Cape Nao



XI. Sierra Morena

is a high promontory, and the coast continues thence alternately high and low, but nowhere much indented, so that good harbours are few. This description and a study of the map will suggest that the country as a whole is not easy of approach from the sea. The Guadalquivir in the south-west alone of all the rivers is navigable for any considerable distance.

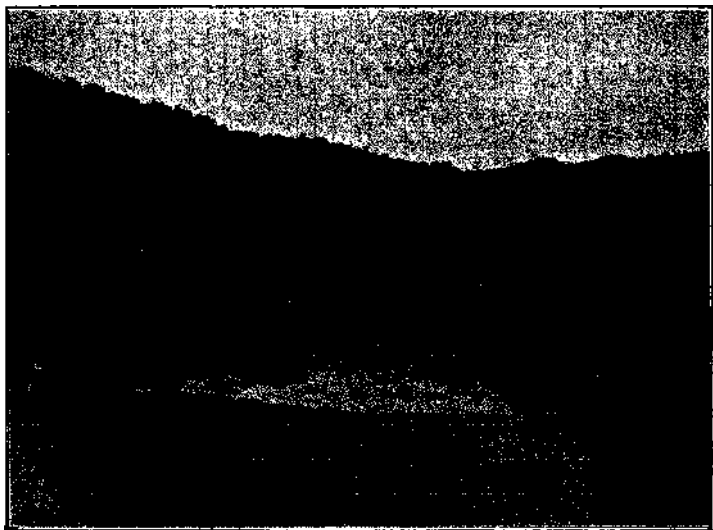
45. *Relief.* The table-land of the Meseta occupies over two-thirds of the whole peninsula. Its average

height is 2,500 to 2,700 feet above sea-level. North and south it is bordered by mountain-ranges: the Cantabrian mountains which continue the line of the Pyrenees along the Biscay coast on the north ; a series of ranges along the Mediterranean coast on the south among which the Sierra Nevada rises to an extreme height (11,400 feet) exceeded in Europe only by the Alps. The highest point in the Pyrenees just exceeds 11,000 feet. The Meseta itself is crossed, and its surface is broken, by a series of ranges extending in a general direction west and east. These ranges divide into two main systems, respectively north and south of Madrid and of the upper basin of the Tagus. In the Sierra de Grados, part of the northern system, an extreme height of 8,700 feet is reached. The Sierra Morena is sometimes regarded as a third system parallel to these two and farther south ; but its top is really little else than the edge of the steep fall from the table-land to the low valley of the Guadalquivir. The term *sierra*, common in the names of mountain-ranges in Spain, or *serra* in Portugal (and in other lands where the Spanish and Portuguese languages are used) refers to the saw-like edge characteristic of many ranges in the peninsula.

The west-and-east ranges described do not belong to the main water-parting on the Meseta. This lies generally north and south, and well to the east of the central meridian of 4° W., so that the longer downslope of the table-land is westward, and the west-flowing rivers are longer than those flowing east, excepting the Ebro, whose narrow basin separates the Pyrenees from the Meseta. Those which flow north or south are very short, by reason of the high mountains rising near these coasts.

46. *Rivers.* The principal rivers of the peninsula

are five. The Douro, Tagus, Guadiana, and Guadalquivir flow westward from the table-land, though all but the Douro turn toward the south in their lower courses. The fifth is the Ebro, flowing east. The Guadiana and Guadalquivir, entering the Gulf of Cadiz and therefore most immediately accessible from Africa, bear names of African (Arabic) origin: the syllable



XII. Tagus gorge and edge of Mcseta, Toledo district

guad represents the Arabic *wad* or *wadi* commonly applied to rivers or dry river-beds in north Africa and south-western Asia; and the name Guadalquivir means the great river. In length it is not the greatest but the least of the five rivers we have named (the Tagus is the longest), but we have seen that it is the only one of any importance for navigation from the sea, so that it was fairly named by the Arabs and Berbers who, coming from Africa, invaded and occupied much of the

peninsula from the eighth century onward. The rivers of Spain have their chief value for irrigation. We shall find (§55) that, except in the northern mountain region and Portugal, agriculture is largely dependent on



XIII. Gorge and edge of Meseta, Toledo

artificial irrigation, the rainfall being insufficient, and the dry season too long, to keep the soil moist without this help.

47. *Minerals.* Spain is probably richer in minerals than any other European country. Mining has been developed largely by foreign enterprise, and especially British, but might be extended. The mineral fields are

The Iberian

on the edges of the plateau and the mountains bordering it, not on the plateau itself. Iron ore is obtained in large quantities in the Cantabrians and Murcia. Copper comes principally from the mines of Rio Tinto and others at the south-western extremity of the Sierra Morena; lead from Murcia and the Jaen district of Andalusia; silver from the Almeria district of Granada; mercury from Almaden in the upper part of the Guadiana basin. Coal is found in the western Cantabrians (near Oviedo and elsewhere) and in the district of Cordova (Andalusia), but the beds are not fully worked. There is a mountain of rock-salt at Cordona in Catalonia, and less important minerals are many.

48. *Climate.* The contrasts in climate are great, and we have already noticed (§16) the comparison of the types of climate found in the peninsula to those of a whole continent on a small scale. The north (Cantabrian and Pyrenean division) has a maritime climate like that of western Europe generally—equable and mild[^];jp\$th rain at all seasons but principally in autumn arid)winter, and in some parts a heavy annual fall, up to 65-70 inches in the north-west. The west (Portugal), as we have also noticed (§ 16), has winter rains, and a climate of Mediterranean type to that extent, but modified by the ocean to the west, which especially helps to cool the air in summer, although, as would be expected, there is an increase in mean temperature from north to south.

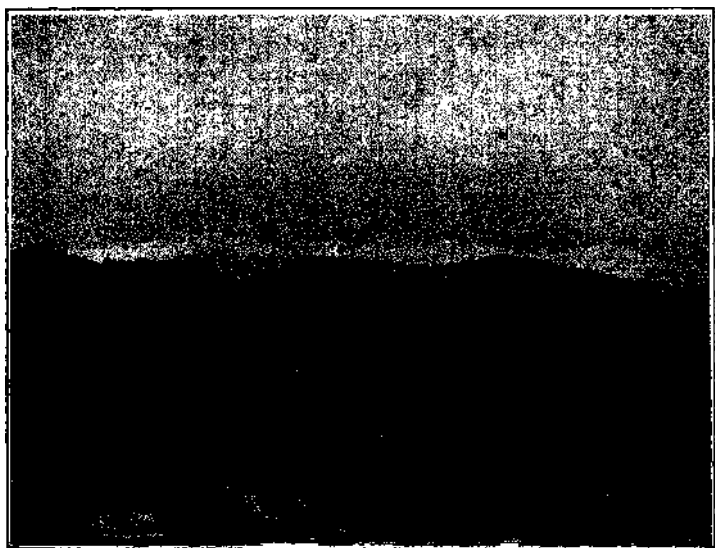
The plateau, on the other hand, together with most of the Ebro basin, has great extremes of temperature—these parts are very hot and dry in summer, and so cold in winter that skating is often possible at Madnid There is most precipitation in winter, often in *the form*. of snow. There is in summer a large daily range temperature, from great heat in the day to soid at

night. The landscape at this season is generally arid, as vegetation is scorched by the sun, and the dry surface powders into deep dust, which is blown up to fill the air with haze, for there is almost always wind: calms are rare. In the Ebro valley, sheltered by surrounding heights, the summer heat is specially trying, and the light-coloured dry surface reflects the glare of the sun. The climate of the plateau may be described as a combination of Mediterranean and interior types ; and on the east and south of the plateau it merges into the true Mediterranean type, with a winter rainfall nowhere great, and in parts very small (§ 16). Though winter in the north-east may be cold, in the south it is not, and frost is very rare. The hottest part in summer is not the southernmost, for the cooling influence of the ocean penetrates thus far ; the highest average temperature on the coast is found in the south-east.

49. *Vegetation.* From our description so far it would appear that within the peninsula, although there are vast monotonous tracts of dull scenery on the plateau, there are also strong contrasts between one region and another, and in some parts great variety and beauty. A view of the natural vegetation and cultivation strengthens these ideas.

The mountains of the north, wild and in parts snow-covered on the heights, have rich valleys on their flanks, with fine forests of oak, beech, and chestnut on the lower slopes ; while among fruit-trees the apple is so common that cider is the usual drink. Under the influence of the moist West-European climate, free of intense heat in summer, green meadows like those of France and England are found ; but not elsewhere in Spain. Rolling forested country also appears on the main dfcride of the plateau, as about the head-waters of the Tagus. But the level parts of the plateau are

largely unfertile and treeless—nasty country, sometimes so inhospitable as to be almost uninhabited, as in the so-called 'unpeopled' country (*despoblados*) south-west of Toledo. A poor steppe vegetation, with plants characteristic of salty soil, sometimes appears, as in the upper Ebro basin and in the south of Old Castile and New Castile. The Tierra de Campos in the north



XIV. Dry vegetation. Sierra Nevada in background

of Old Castile, toward the southern foot of the Cantabrians, is exceptional in being a fertile wheat-growing district.

The natural vegetation of the plateau consists in the main of Mediterranean forms. The olive appears locally all over the southern half, growing thickly, for instance, on the slopes of the Sierra Morena; and large tracts are covered with evergreen shrubs.

50. In the west the olive also occurs locally, princi-

pally in Portuguese Estremadura, about the lower course of the Tagus, but even as far north as the Galician coast. Portugal has oak and chestnut forests principally on the hill-slopes of the north and centre ; south of the Tagus the cork-oak becomes important. The vegetation in some parts of Portugal, where heavy rainfall is combined with mild temperature, is perhaps



XV. Sub-tropical vegetation, Seville

richer than anywhere else in Europe, plants characteristic of north-western Europe, the Mediterranean region, and sub-tropical latitudes being found together.

51. The southern mountain-region of Spain shows perhaps the most strongly marked contrasts. In the valleys of the south, about Malaga and in Granada, including the district of Las Alpujarras ¹ vegetation is rich and beautiful. Woodlands include the valuable

¹ A name of Moorish origin, meaning grassland.



XVI. The Alhambra, Granada

cork-oak. On the contrary, on the northward slopes of these mountains, and on the drier lands of the Mediterranean edge from Almeria to Alicante, steppe conditions are found: indeed, in some parts of this last belt an approach to desert conditions may be seen, with green oases appearing among extensive barren or rocky tracts. The steppe lands hereabouts, however, are not always valueless, for they bear the useful esparto grass (§55). The fertile lands of the south bear a number of plants of true sub-tropical character, both native and introduced from other countries, such as the date-palm and the banana, as well as ordinary Mediterranean plants. Farther north along the Mediterranean edge the natural Mediterranean vegetation is seen alone. The low scrub which grows up on uncultivated land and is known as *maquis* in France (§ 22) is called *monte baja* or lower mountain-slope vegetation in Spain, in distinction from *monte alto*, the forest growth of higher levels. The cork-oak again becomes important in the north-east (Catalonia).

52. *Population.* Spain is a kingdom with its capital at Madrid. Its population is 18,000,000; a low figure in comparison with the area of the country and its natural conditions, which could support a much larger population, and in fact did so, as far as can be judged, at the time of the Roman Empire. The reasons for the decrease since that early period are largely historical: they have to do with the period of conquest by the invading Moors; their final expulsion; the wars of that and later periods; and lastly, the emigration from the home land to the now independent countries of America which were originally Spanish colonies. Apart from all this, the difficulties of the climate, with its long dry season and great extremes, and the inhospitable nature of much of the plateau country, are geographical

reasons for decrease or smallness of population ; and these are illustrated by the present distribution of the inhabitants. The most densely inhabited regions, excepting Madrid and its immediate neighbourhood, form belts between the margins of the plateau and the coasts. Seven-tenths of the total population live in these belts, which represent less than half (five-tenths) of the total area of the country. The western half of Portugal is another such populous belt. The total population of Portugal is over 5,000,000, and the average density of population is half as much again as in Spain. Portugal is a republic with its capital at Lisbon. (See further § 26.)

53. *Towns.* The larger towns are all in these belts, excepting Madrid ; and this although the inhabitants of the plateau do not live in scattered homesteads, but gather together, where water-supplies are found, in small towns—comfortless clusters of houses, exposed to sun and wind. The site of Madrid itself has no geographical advantage except the central position which makes it the heart of the kingdom : the surrounding country is bare and ugly and the climate uncomfortable. The other large inland towns—capitals of the old provinces and others—commonly occupy a central position in a river-basin or valley. Such are Oviedo in Asturias ; Valladolid in the upper basin of the Douro ; Toledo in that of the Tagus ; Cordova and Seville on the Guadalquivir : Granada in the rich and beautiful upper valley of the Genil, in the heart of the southern mountains ; Zaragoza (or Saragossa) in the centre of the Ebro basin. Many such inland towns show signs of being less important than they used to be, though they retain splendid ancient buildings, such as the Moorish Alhambra near Granada, which keep their fame alive. The remaining chief towns are mainly

ports—San Sebastian, Bilbao, Santander, and Gijon on the Biscay coast, all increased in importance by their export of iron ore to Britain ; Corunna, with the naval port of Ferrol, and Vigo on the north-west (Atlantic) coast; Cadiz commanding the mouth of the Guadalquivir ; Malaga, Almeria, Alicante, and Valencia, trading centres and ports for the rich lands of the south and east; Barcelona, the port and industrial centre of Catalonia. On the Portuguese coast are Lisbon and Oporto, both on fine natural harbours at the mouths of rivers (the Douro and Tagus); at Lisbon, in particular, the Tagus broadens into a beautiful land-locked basin, narrowing again as it flows toward the sea.

54. *Communication.* The plateau is isolated from the districts surrounding it, and roads and railways only reach it by more or less difficult passes, especially on the north and east. The main railway routes are :

(i) From Madrid northward and north-eastward, to the Biscay coast, and to France by the passage west of the Pyrenees. There are many passes over the Cantabrian mountains : the Madrid-Palencia-Oviedo-Gijon railway follows the Pajares pass; the Palencia-Santander railway the Reinosa. The main line to France runs through the gorge of Pancorbo.

(ii) From Madrid north-eastward to Zaragoza, the Ebro valley, and Barcelona, descending from the plateau by the Jalon valley, an important natural line of communication. This joins at Barcelona—

(iii) The east (Mediterranean) coast railway from Valencia, &c, to France, around the eastern end of the Pyrenees.

(iv) From Madrid south-eastward to Valencia and Murcia, a difficult route through the district of La Mancha, where the plateau joins the southern mountain system.

(v) From Madrid south-westward to the Guadalquivir valley—Cordova, Seville—and Cadiz, making a gradual descent to the valley through the pass of Despenaperros at the east of the Sierra Morena.

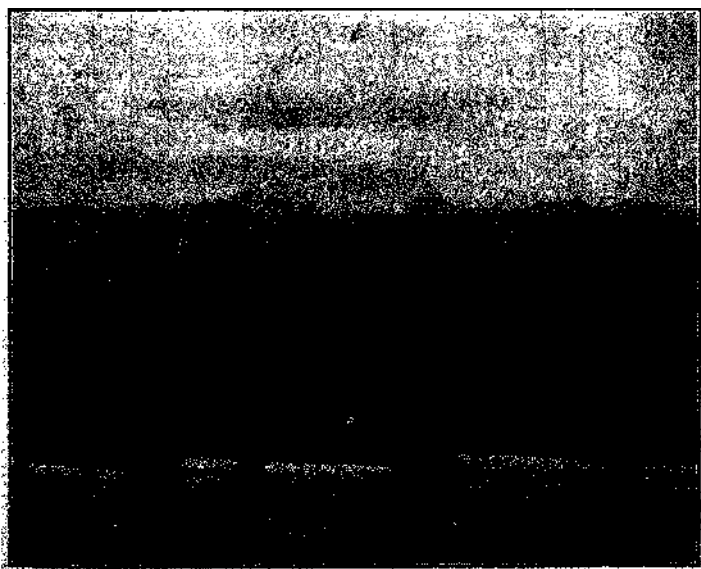
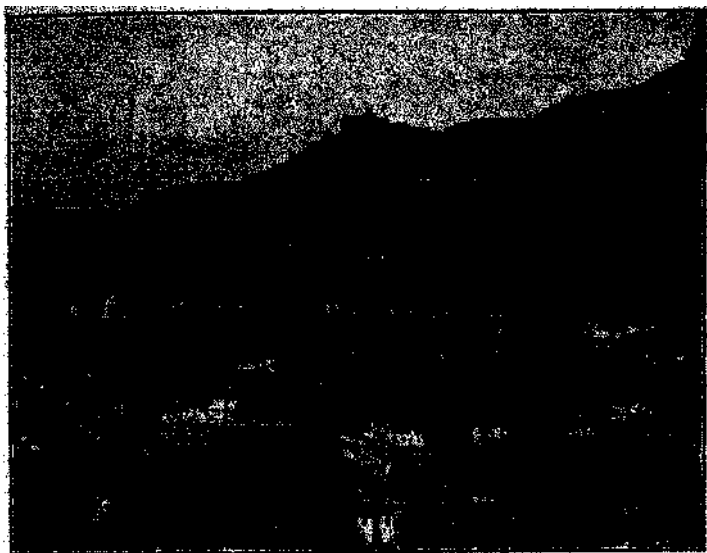
(vi) From Madrid westward down the Tagus valley to Lisbon ; and (vii) a more direct line from the north into Portugal, by Valladolid, Medina, and Salamanca.

55. *Agriculture.* The Spanish peasants as a rule are not very clever farmers, unless they have learned abroad as emigrants ; and agriculture is not as prosperous as it was when the Moors or the Romans were in the country. Except in the Cantabrian provinces, under the West European conditions of climate with plenty of rain (§ 48), irrigation is necessary to many crops, such as fruits, vegetable, and rice, though olives, vines, and grain are grown mostly on land which is not irrigated. In the east and south, especially in Catalonia and Valencia, the irrigation works are extensive and some are very old—Moorish or even Roman. They consist of canals constructed sometimes for long distances and carried with much skill along the side of hills or on high aqueducts, from the sources of water in mountain-springs and streams, to reservoirs and networks- of artificial channels through which the water is distributed to the agricultural plain lands. Such lands are called *huertas* in Valencia and Murcia, *vegas* in Andalusia : both words mean gardens, the one coming from the Latin, the other from Arabic. Wheat and barley (which is used as fodder for horses and mules) are the chief grain crops, with rice in the low-lying marshes of Valencia. Some of the wines of southern Spain are famous, such as those from Alicante and Malaga, and that called sherry, named after the town of Jerez (which is pronounced more like * sherry ' than it looks to us). Dried fruit such as raisins and plums, and

almonds, chestnuts, and walnuts, are produced. The olive (§49) is extensively cultivated both for its oil and for eating ; the chief centres for these two branches of the industry are Cordova and Seville. Oranges and lemons yield great crops in Andalusia and along the Mediterranean coast. Both sugar cane and sugar beet are largely grown in Granada, Malaga, and Almeria. Among many other plant products the mulberry must be noticed ; it flourishes best in Valencia, and feeds the silkworms which support the silk industry. The esparto grass of the south-eastern steppes has already been mentioned ; it is made into paper and mats and used for many other purposes, such as basket-work and hat-making.

There are rich agricultural lowlands in Portugal, yielding wheat and rye in the north, maize in the south, and the vine in all parts ; but cultivation is not well done as a rule. There is less need for extensive irrigation than in Spain, thanks to the heavier rainfall ; but the dry summer season necessitates the use of wells from which water is raised by chains of buckets on a wheel, a system introduced by the Moors and still bearing a name of Arabic origin, *nora*. The most famous vine-growing district is the Paiz de Vinho (vine country) in the Douro valley, for which the harbour of Oporto, at the mouth, is the outlet; hence is derived the name of port for the wine chiefly produced there.

56, *Livestock*. Spain is noted for fine breeds of mules and donkeys; cattle for dairy-farming are raised chiefly in the north; elsewhere oxen are used for ploughing and carting, and bulls are bred specially for the national sport of bull-fighting. Goats are important, especially in the Pyrenean districts; pigs in Estremadura. Sheep are very numerous, though the fine-fleeced merino, which has its origin here, is less



XVII, XVIII. Valley cultivation ; uncultivated uplands, Meseta

important than formerly. It grazes in large flocks in the lower lands of the west during the winter, but in summer it moves eastward and northward into mountainous districts where the pasture is less parched.

57. *Fisheries.* The tunny, anchovy, sardine, and other fisheries, and the salting and curing of the fish, are large industries at many points on the coasts of the peninsula.

58. *Manufactures.* Spain is not among the great manufacturing countries of the world, but there are some important manufactures nevertheless. They are found mostly in coastal districts, where coal, machinery, and raw materials can be most easily imported; although fairly important manufactures have grown up in and about Madrid since that city became the capital. They are found, again, mostly in northern districts, where the climate is more temperate and thus favourable to industry. The silk industry of Seville, Valencia, and Murcia is an exception. Wine and sugar making, the distilling of spirits and olive oil, fruit-preserving, and other industries connected with agriculture and with fishing, are carried on chiefly where the various products of the land and sea are richest. But the big manufactures like those of cotton, linen, and paper are found chiefly in Catalonia, especially in and about the port of Barcelona, and in the north coast provinces, where also are fairly large metal industries near the sources of iron ore and coal. In the north use is made of water-power for generating electricity.

Portugal's chief manufactures for export are connected with cork, the preserving of fish, and the wine trade.

59. *Gibraltar*, guarding the strait through which the Mediterranean Sea is entered from the Atlantic Ocean, is British territory—a small steep peninsula, 1,400 feet high, joined to the mainland by a low isthmus which is neutral ground between the British province and

Spain ; that is, it is owned by neither. The name of Gibraltar is of Arabic origin, from Jebel (hill of) Tarik. The hill or Rock is almost sheer on the east; on the western slopes is the town, with a magnificent harbour and coaling station for naval and merchant ships at its foot, mainly artificial, but in a bay sheltered by the Rock and a high coast opposite. (Sec Frontispiece.)

60. *The Balearic Islands*, in the Mediterranean Sea east of Spain, to which they belong, consist of three chief islands—Majorca, Minorca, and Iviza—and a dozen smaller. They are hilly, with heights over 5,000 feet in Majorca. Climate and vegetation are typically Mediterranean ; the islands are fairly fertile, though water has to be preserved in great reservoirs against the dry summer. As in most islands where conditions are favourable, there is a fairly dense population trading in fruit, grain, wine, oil, and fish. Shoes are made, and marble is quarried. Palma is the capital, on Majorca, which has railways and a good road system.

61. *Andorra*. Far up on the Spanish slope of the eastern Pyrenees is the little independent territory of Andorra, approached only by mule-tracks, preserved by its isolation, and preserving, for the same reason, curious old customs among its ten thousand people.

V

MEDITERRANEAN FRANCE

62. *Physical Features*. The sketch-map (Fig. 7) shows the first points for study of Mediterranean France in the atlas : the mountains which bound it—Pyrenees, Cevennes, and Alps ; the natural gateways which enter



FIG. 7. Mediterranean France

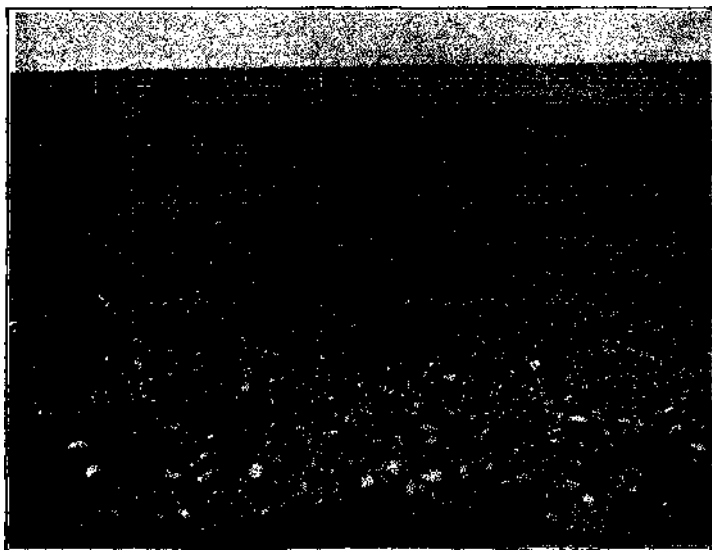
it—the gap of Carcassonne from the west, the Rhone valley from the north ; the notable contrast between the coastal lowlands respectively west and east of the Rhone valley. Westward, the lowland is a relatively broad plain ; eastward there is practically none. Westward, the regular line of the coast points to a low sandy shore, and lagoons are seen behind it. Eastward the irregular coastline suggests wholly different scenery; bold headlands separate lovely little rocky bays, and the foot hills of the Alps slope steeply, at intervals, right down to the shore. For this is the French part of the famous Riviera, one of the most beautiful of all coasts.

63. *Western Division.* Typical Mediterranean conditions of climate and vegetation are found all along these coasts and up the Rhone valley about as far as Montelimar. Mount Canigou in the eastern Pyrenees rises with an almost unbroken slope above the plain to a height over 9,000 feet, and the belts of vegetation are particularly well seen upon it. From the foot up to almost 1,400 feet the olive, oleander, orange, pomegranate, and aloe flourish, with vines to a somewhat higher level (about 1,800 feet); then the chestnut forms a belt up to 2,600 feet, above which the trees are chiefly pines up to 6,500 feet, with birches extending a little farther ; rhododendrons flourish from 4,000 to more than 8,000 feet, and at the summit are low bushes of juniper. Much of the western plain land and the valleys opening from it are rich ; but below the Cevennes—the southern edge of the central plateau of France—in the departments of Gard and Hérault there are the dry limestone terraces known as the Garrigues (compare § 22).

64. *The Rhone Valley and the French Riviera.* About twenty-five miles from the sea, near the town of Arles, the Rhone divides into the two main branches which enclose its delta, a low marshy plain called the Camargue,

Mediterranean France

broken by lagoons. East of this lies a curious flat tract covered with pebbles and known as the Crau. For the rest, the Rhone valley is more favourable to settlement on the east under the Alps than on the west under the Cevennes, and most of the important towns are on this side. More tributary valleys open on to it from east



XIX. The Crau

than from west : they are fertile and sheltered from the cold *mistral* wind (§ 14), though the steep limestone and sandstone hills above them are dry and barren. Eastward from the Rhone delta extends the Riviera coast of which we have read above, sheltered from the cold north winds by the hills behind, and dotted with towns whose hotels and villas receive thousands of visitors during the mild winter and spring—Hyeres, Cannes, Nice, Mentone, and others.

65. *Communications.* Excepting unfavourable lands such as have been mentioned—the Garrigues, the Camargue, the Crau—the whole of the Mediterranean



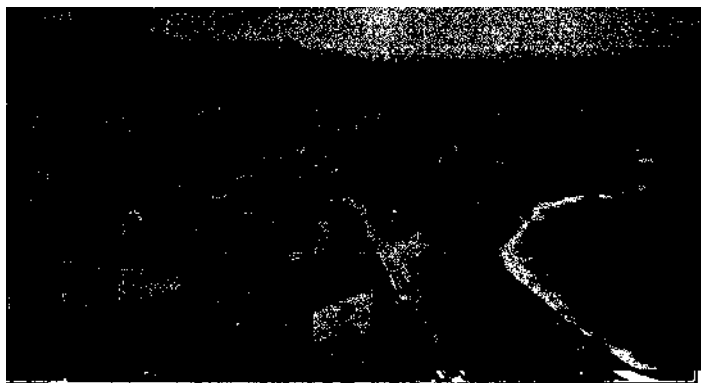
XX, XXI. Valley of the Var, above Nice

lowlands of France are thickly populated, especially the western plain from Carcassonne to Nimes, the Rhone valley from Avignon northward, and the coastland from Nice eastward. Among many flourishing towns, whether trading and manufacturing centres, ports, or health resorts, the great port and industrial city of Marseilles

takes first place. It lies eastward of the Rhone delta, where the coast begins to be suitable for harbourage and the site of a big town. It is the port for the Rhone valley and the chief commercial outlet of France on the Mediterranean. East of it is Toulon, the French Mediterranean naval port. The Rhone valley we have noticed already as one of the chief gateways to the Mediterranean region (§ 10) ; the river is followed on both banks by railways, and is itself important for boat traffic, though not for sea-going ships. The improvement of its navigation is often spoken of. The same is true of the Canal du Midi (that is, of the south), which connects the Bay of Biscay with the Mediterranean Sea through the Gap of Carcassonne. This gateway is naturally less important than that of the Rhone, as it offers a direct route to the Mediterranean from only the south-western part of France. But a modern ship-canal here would shorten the passage for ships from a great part of the North Atlantic coasts. The existing canal is interesting because its building about 1680 marked the beginning of the canal system of France, which is extensive. Passing, as we have seen, between the Pyrenees and the Cevennes, it has only to rise a little above 600 feet at its highest part.

66. *Products.* The vine is cultivated more or less throughout Mediterranean France, and the department of Herault, covering the middle part of the western plain and the plateau slopes behind it, has a third of its cultivated area under vineyards—the largest area of any French department. Wheat and oats are fairly extensively grown, especially in Gard, west of the lower Rhone. Market gardening is important, and vegetables are grown early in season to be sent to distant markets farther north, which cannot be supplied from home gardens till later in the year. In the same way, there is an export of cut

flowers, especially from the eastern coastlands, where also there is an industry in making perfumes from the flowers. There is much fruit cultivation : the chestnut is largely grown in the west; and the olive especially in the lower Rhone valley, where it supplies oil factories



XXII. Monaco

at Marseilles and elsewhere. The mulberry also flourishes in Herault and the Rhone valley ; silkworms are led upon its leaves, and there are silk manufactures, as at Alais. The tuberous vegetable called truffle is found in many parts. The fisheries are valuable. In the hills bordering the region there is a good deal of mining, especially for iron, and at several points for coal and lignite ; asphalt is worked in Gard. There is a large production of salt from salt pans along the coast, especially about the Rhone delta.

67. *Monaco*. On the east coast, not far from the French boundary, is the small independent state of Monaco—the smallest, indeed, of all in Europe, being only 21 miles long and less than three-quarters of a mile wide at the most. It is under French protection, but does not belong to France, having a prince of its own. This is not, like Andorra (§ 61), a little state which has kept independence through being isolated. On the contrary, it is on the main route along the coast between France and Italy, and is full of visitors, many of whom are attracted by the entertainment of gambling in the famous casino of Monte Carlo.

68. *Corsica*. This island, which belongs to France, is separated by the narrow Strait of Bonifacio from Sardinia, which belongs to Italy (§ 103). Corsica is a mountainous island about half the size of Wales. From the central range spurs branch out and separate one valley or district from another. This, and the fact that the island is not touched by main routes through the Mediterranean, are geographical reasons for the isolation of the inhabitants, their retention of old customs, and their separation into local clans or groups, between which the vendetta or feud is sometimes still maintained after a quarrel. The island's coasts are steep and broken by bays—some of them good natural harbours—on the west and south; but there is low country, with lagoons along the shore, on the east. Wheat, vines, olives, and other usual Mediterranean products are cultivated, but the people are backward in agriculture, and some of the work is done by labourers who come at the busy seasons from the near parts of Italy. The forests of Corsican pine, oak, chestnut, and beech are valuable, but have been destroyed too much, and thick *maquis* covers a good deal of the land. There are a few minerals, but the exports are principally timber, charcoal, and other forest

products, and fruits. Bastia and Ajaccio are the chief ports, and are connected by a railway, but communications through much of the island are bad. Corsica has some reputation for sport, as *mouflon* or wild sheep, boars, and stags are found, and the rivers contain trout.

VI

ITALY

69. *Shape.* We may liken Italy, as it appears on the map, to a mushroom with a long bent stalk. The head is continental Italy, whose boundary, separating it from France, Switzerland, Austria, and Yugoslavia, extends in an irregular curve through the Alpine region, from the western side of the Gulf of Genoa to the eastern side of the head of the Adriatic Sea. The stalk is peninsular Italy, the shape of which is more usually compared to that of a man's leg; or preferably, as least as far as the foot is concerned, a woman's, for the foot wears a very high-heeled shoe. The heel is the long promontory of Apulia, which forms the eastern shore of the Gulf of Taranto, and the western shore of the Strait of Otranto, the entrance to the Adriatic Sea. And the Gulf of Taranto is as deep, from its head to the open sea, as the ankle of the leg of Italy is wide—a point worth remembering when the map is drawn. The leg wears a kind of spur above the ankle, where the promontory of Mount Gargano juts out into the Adriatic. The calf of the leg (not very well developed) curves outward into the same sea at Ancona.

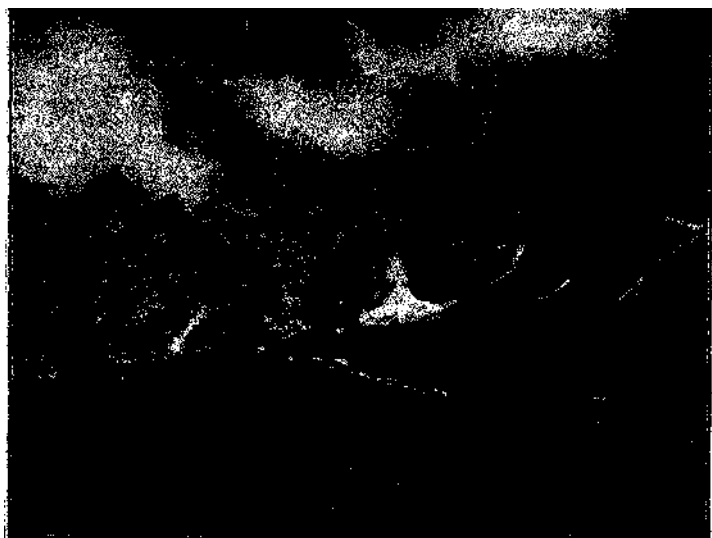
70. *The Map.* In laying down a map of Italy, the line of 13° E. would give us, roughly, the central meridian; that of 43° N. the central parallel; at the point where

these cross, we should draw a line from north-west to south-east, which will give us approximately the axis of the peninsula.

71. *Main Divisions.* The structure of Italy may be very simply illustrated thus : in the letter S the top curve represents the Alpine region; the middle of the letter represents the mountain system of the Apennines, which occupies most of the peninsula, and curves through its 'toe' at the bottom of the letter, which continues their line through the island of Sicily. Of course that letter S is a very rough representation indeed : the middle should be longer than it is, and the bottom curve shorter than the top. Within the top curve—that is between the Alps and the Northern Apennines—there is enclosed the basin of the Po. This plain and the Alpine territory to the west and north of it, together with the territory of Istria on the east side of the Adriatic, may be reckoned as 'continental' Italy, distinguished from 'peninsular' Italy, as a physical map will show.

72. *The Alps* separate Italy from France and central Europe. But the Alps are not a frontier range as the Pyrenees are between France and Spain. It is better to say that the northern boundary of Italy runs through the Alpine region. At the point where it separates France from Italy on the Riviera coast there is no particular natural feature ; but the line immediately ascends the mountains and follows, for the most part, the crests of the Maritime, Cottian, Graian, and Pennine Alps, so that the eastward slopes and valleys of these mountains belong to Italy. Mont Blanc, the highest Alpine summit (15,800 feet) is on the frontier, and so is Monte Rosa (15,200 feet). Farther east the boundary (with Switzerland) comes down from the heights and cuts across the southward valley of the Ticino and the lakes Maggiore and Lugano. Then it takes to the great heights

again so as to give Italy the southward valleys, including that of the Adige which leads to the famous Brenner Pass. The Italian Alps thus include the Ortler (12,800 feet) north of Lake Garda, the famous sharp-peaked Dolomites on the other side of the Adige, and other high groups. The Italian Alpine belt, except at the Tieino valley, is thirty to fifty miles wide in the west, and



XXIII. Peaks of the Dolomites

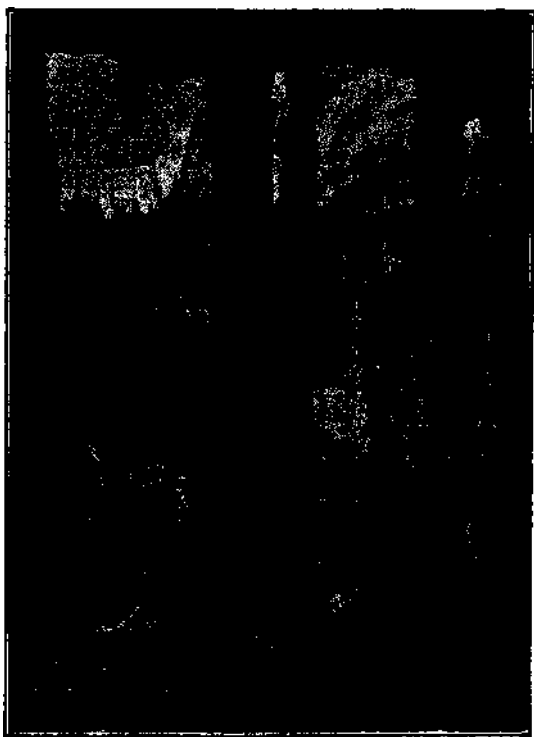
increases to 120 miles (direct) between the Brenner Pass and the plain. The boundary then runs south-east to the Adriatic Gulf of Quarnero, close to Fiume. Italy, here bordered by Yugoslavia, possesses the peninsula of Istria and some of the dry limestone hill-country behind it, called Karst (§ 23). Some of the northernmost islands of the Dalmatian chain, off the east coast of the Adriatic Sea, also belong to Italy, and so do the town of Zara and the island of Lagosta and others, farther south along this coast.

73. *The Peninsula.* Peninsular Italy is bounded by the Adriatic Sea on the east, and on the west by those parts of the western Mediterranean which are called the Tyrrhenian and Ligurian Seas. The great island of Sicily, extending from the ' toe ' of the peninsula, several smaller islands off the west coast, and the island of Sardinia, belong to Italy. The land boundary is in length hardly a third of the sea boundary, for the coast is 4,000 miles long, and few large towns even in continental Italy are over seventy miles from the sea. We have already noticed (§10) the tremendous importance of Italy in relation to communications between Europe and countries surrounding and beyond the eastern Mediterranean. For sea-traffic westward, in the same way, the port of Genoa in the north-west on the gulf of that name, is well placed. The peninsula, in fact, may be compared to a pier projecting into the sea, along which railways run from the interior of the continent, and alongside which ocean steamers may lie.

74. *Coasts.* The Riviera coast of the north-west, enclosing the Gulf of Genoa, is nearly all steep, mountainous, and very beautiful, broken into lovely little bays with small towns and villages extending up the slopes from the fishing and sea-trading settlement by the shore to the settlement of cultivators above. From Spezia to the Gulf of Gaeta north of Naples the west coast is low and marshy, except where it is broken by high bold promontories such as Mount Argentario and Mount Circeo. Farther south it again becomes steep and high. A number of islands lie off it: Elba is the largest, and Capri, south of Naples, is famous for the wonderful grottoes or caves in its limestone cliffs.

The east side of the toe of Italy, like the west, is closely backed by mountains. The Adriatic (east) coast generally is more regular than the west: it has no

considerable natural port except Ancona, which is too high up the Adriatic Sea to be of first importance. And the coast of the Po basin is so low that sea and shore merge in a maze of banks and lagoons, on either side of



XXIV. Limestone grotto, Capri

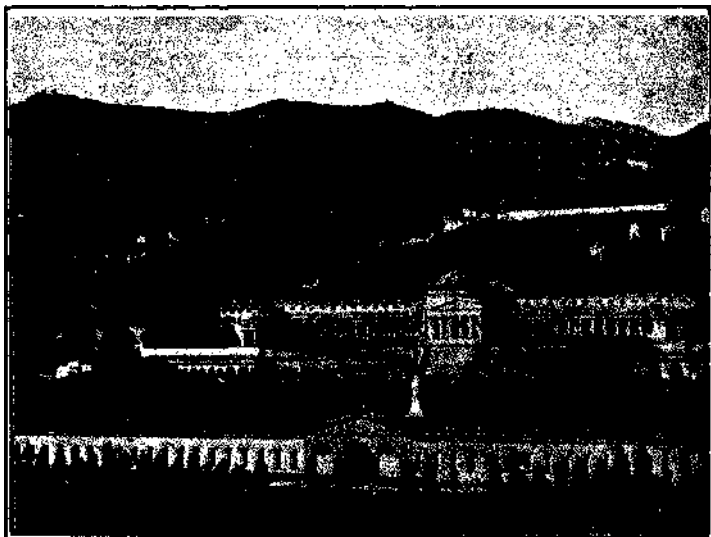
the mouths of the Po, between Ravenna and the Gulf of Trieste.

75. *Basin of the River Po.* This basin is enclosed between the Alps on the north and the lower mountain-chain of the Apennines on the south. It represents a former sea-gulf, which existed quite late in geological

time, but the floor was raised and the gulf was filled by the deposits carried down from the mountains by the Po and the many rivers which are now its tributaries, or enter the Adriatic on either side of its delta (for the great river itself does not receive the whole drainage of the basin). This process accounts for the nature of the coast just described : the land is still encroaching on the sea ; the lagoons, separated from the sea by spits of sand, gradually fill up and were once more extensive than now, so that it was formerly possible to navigate all the way from Ravenna to where Venice now stands, about eighty miles, through lagoons. The growth of the land seaward, owing to the work of the rivers, is illustrated also by the way in which the coast-line projects around the delta of the Po.

76. The delta extends about twenty-five miles inland, and at its head the Po is in parts as much as half a mile wide. The floor of its basin is a very level plain, and except at a few points the mountains rise suddenly and steeply from it, so that it is a good example of a river-basin to study for an understanding of the meaning of that term. Its shape, however, is that of a shovel rather than a basin. The clearly marked edge of the floor of the basin may be illustrated by the straight line of the railway—to be traced in the atlas—from the Po at Piacenza south-eastward to Rimini on the Adriatic coast. An ancient road follows this direct line also, close along the foot of the Apennines all the way, but never having to climb over projecting slopes. Along the higher Alpine wall, however, there is a belt of foothills, formed largely of the moraines of ancient glaciers. Between Vicenza and Padua in the east groups of low hills arise, which represent old volcanic tracts, and to the east of Turin, on the opposite side of the Po from the Alps, the Montferrato hills overlook the plain from the west.

gulf they are only 3,000 to 4,000 feet high ; further east they reach 5,000 to 7,000 feet. The upper slopes are thickly wooded here, with chestnuts, oaks, and beeches ; above is open grassland. This mountain-belt is sparsely populated, especially on the north side. The making of roads and keeping them in repair is not easy, owing largely to the extent of soft clays. The mountains help



XXVI. The Apennines above Genoa

to mark a climatic division (§ 18). For such reasons the northern Apennines are taken to form a natural barrier between continental and peninsular Italy.

80. *San Marino*. To the south of Rimini, high among the hills, one little city, San Marino, with a bit of surrounding territory, remains an independent republic, as Andorra does among the Pyrenees (§ 61).

81. *The Central Apennines* curve south-eastward from this neighbourhood, and the line of their greatest heights

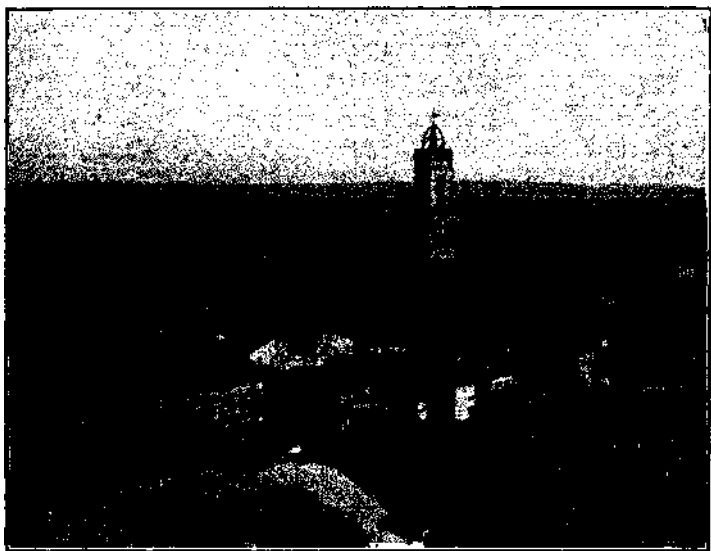
runs parallel to the Adriatic coast and thirty to forty miles from it, but eighty to a hundred miles from the west coast of the peninsula. They cover parts of the territories of the Marches, Umbria, and Abruzzi, and the greatest heights in the system are found in this division of it, up to 9,000 feet in the Gran Sasso d'Italia. There are many steep limestone peaks and crests, and the dry karst type of scenery (§ 23) is found in the south, with holes and underground channels hollowed out by water, and strong springs breaking out low down on the slopes. There is no long main ridge of great height; instead, the mountains are broken into blocks by deep valleys.

82. *The Southern Apennines*, from near the group called the mountains of Matese, bend towards the south. They, too, are broken up into short ranges and irregular masses by winding valleys, often so narrow that communications are difficult. The limestone summits and other formations finally give way, in the 'toe' of Italy, which is the territory called Calabria, to rounded hills of older rocks, covered with forest (La Sila),

83. *The Apennine Foreland*, To the west of the Apennines between lats. 44° and 40° N., covering most of the territories of Tuscany, Latium, and Campania, lies the country sometimes called the Apennine foreland. It is separated from the Apennines themselves by a valley or depression, not watered by any one river, but by parts of a succession of rivers—the Arno, Tiber, Garigliano, Volturno, and others—which, as a map shows, flow parallel to the axis of the peninsula in some portions of their courses, before turning at right angles to it to reach the sea. The depression is marked between the courses of the Arno and Tiber by the Chiana valley, which is marshy, and sends water to both these rivers. The foreland comprises a series of low plains—the

Maremma, along the coasts of Tuscany and Latium, the alluvial tracts about the mouths of the principal rivers, and the Pontine marshes in the south of Latium.

84. *Volcanoes.* For the rest, the foreland is broken and hilly with detached groups of the Apennines or remains of older mountains, and, at some points, old volcanoes and tracts of old lava and ash, such as the



X X V I I . The Apennine foreland (Siena)

Roman plain and the Phlegraean fields near Naples. The craters of some of these contain round lakes, such as Bolsena and Braeciano, but Lake Trasimeno, the largest in peninsular Italy, is not one of these. There is also, to the south of Naples, rising boldly from the shore of the bay, the still active volcano of Vesuvius, an eruption of which buried the Roman towns of Herculaneum and Pompeii at its foot, which in modern times have been dug out and form wonderful memorials of the period of

the Roman empire. The line of weakness in the earth's crust, which is shown by these volcanoes, is continued southward, for Stromboli in the Lipari Islands north of Sicily, and Etna in Sicily itself, are also active volcanoes. And this region, especially about the Strait of Messina, between Calabria and Sicily, is subject to bad earthquakes.

85. *The South-East.* The central Apennines, as we have seen, slope directly to the Adriatic coast, but the southern Apennines curve away from it, and there is a foreland to the east of them, comprising the plains and chalk downs of Apulia. To the north of these is the limestone height, detached from the Apennines, of Mount Gargano, which forms the spur on the Adriatic coast already mentioned (§ 69).

86. *Minerals and Power.* The soil of Italy is generally fertile, and the principal industries depend largely upon a few products of cultivation, such as wheat, flax, hemp, and silk (§ 97), especially as the peninsula is not rich in minerals. Most of the mineral wealth comes from the islands (sulphur from Sicily, lead and zinc from Sardinia, iron from Elba), and there is no coal in the peninsula. Water-power is therefore important for manufactures, especially that of the Alpine tributaries of the Po, and in the western Apennine foreland even the power of volcanic steam from the earth has been applied to industry. The Alpine rivers are kept, as we have seen, at a fairly steady flow, but the Apennine rivers, unless fed by constant springs, from the limestone, though running in high flood during the autumn and winter rains, are dry or nearly so in summer, and agriculture needs irrigation ; moreover, some parts of the limestone or chalky surface, as in Apulia, are naturally porous and dry.

87. *Climate and Vegetation.* We have also observed (§18) the great difference of climate between northern

Alpine region, the olive grows and ripens its fruit in sheltered positions along the foot of the mountains and in the lower parts of the valleys. The vine yields good wine from vineyards on the lower slopes, if they are well exposed to the sun. Deciduous trees, such as oak, beech, and sycamore, grow here and there on the slopes up to 5,000 feet or even more ; whereas their usual limit is about 4,000 feet on the north side of the Alps. Similarly the coniferous trees of the subalpine region reach 7,000 feet or more on our side—a full 1,000 feet higher than their limit on the opposite slopes. The upper pastures or ' alps ' where live stock is fed in summer, and where the most beautiful flowering shrubs and plants appear, extend between this limit and that of the great heights at which perpetual snow lies. This last condition, again, is not found at any particular height : on a sunny slope the snow will melt at a greater height than on a shaded slope ; but on the contrary, on a slope exposed to wet winds more snow is precipitated than on a slope sheltered from such winds. The lower limit of permanent snow on the Alps cannot, therefore, be defined more exactly than as lying, generally, between 8,000 and 9,500 feet above sea-level.

90. In Italy, a country on the whole thickly populated, even more than usual destruction of the forests has taken place, through many centuries; and it is commonly found that streams which flow as torrents in the wet season have carried good soil from the hill slopes, and formed marshes in the lowlands, where the natural protection of forest would have prevented them from running off so quickly, and causing the damage they have caused.

91. *Population.* The population of Italy, including its islands, is over forty millions. The country as a whole and the island of Sicily too, are densely populated—

most densely in the northern plain, along the coast of the Gulf of Genoa, along the Adriatic coast from the plain nearly as far south as Mount Gargano, and thence across the peninsula to the district of Naples, in the north part of the Apulian lowland, and around the narrow coastland of Calabria. More particularly, the areas of



XXIX. The Ruman plain

closest population in continental and peninsular Italy are : (1) an area between the lakes and the Po, and including Turin, Milan, and Brescia ; (2) an area about Padua in the east of the plain ; (3) about Genoa ; (4) about Leghorn and the lower valley of the Arno ; (5) around the Bay of Naples. Rome, the capital (§ 95) is remarkable as not being situated, as the other largest towns are, in an area where the population outside the city is dense ; on the contrary, the low coastal plains north and south of Rome, are unhealthy, or at

any rate were so till recent years, and have a scanty population.

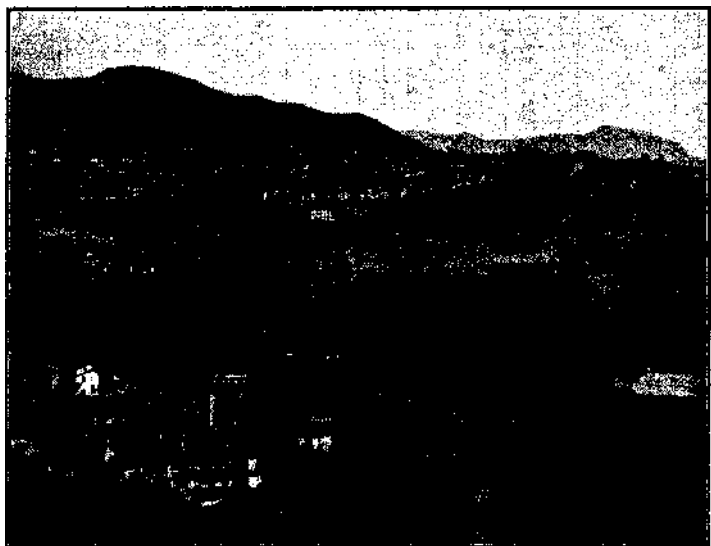
92. The Italian language is the national speech probably in a stronger degree than in the ease of most of the; large European states. But it has different dialects, and the people have different characteristics in various parts of the country, and these are to some extent preserved by the natural divisions of the land, and even caused by the geographical conditions. For example, the southern Italians tend to live easily, and not to work hard, under the influence of the summer heat; the northern Italians are more industrious, because, it is said, the cold winter helps to counteract the slackness caused by the hot summer. The French language crosses the boundary in the Alps of the north-west, and German and Slav tongues are heard in the north-east with a little Albanian and Greek here and there in the south. A great number of Italians live abroad- in other European countries and in Britain, and especially in the United States, in Argentina and Brazil, and other parts of South America, for large numbers of Italians emigrate from their own crowded country, where in many parts the conditions of life are poor. But they do not forget its natural beauties, and many return when they have earned sufficient money.

93. A large part of Italy is or has been particularly subject, among Mediterranean countries, to malaria, although the northern and central Apennine regions and most of the northern plain (except about Venice and a few other points) and of Apulia are free from it. Some of the low marshy eoastlands of the west have been almost uninhabitable on this account; but improvement has been made (among other methods) by draining marshes, and otherwise attacking the mosquitoes **which breed there, and** convey the disease to man.



XXX, XXXI. Venice

94. *Towns.* In the northern plain we find a clear example of the rule that a town commonly grows up at the outlet of a mountain-valley to a plain, if the valley be an important line of communication, through the mountain region. Thus Turin, Milan, Verona, Udine, and others receive routes from the Alpine valleys, the first three especially being junctions for main railways



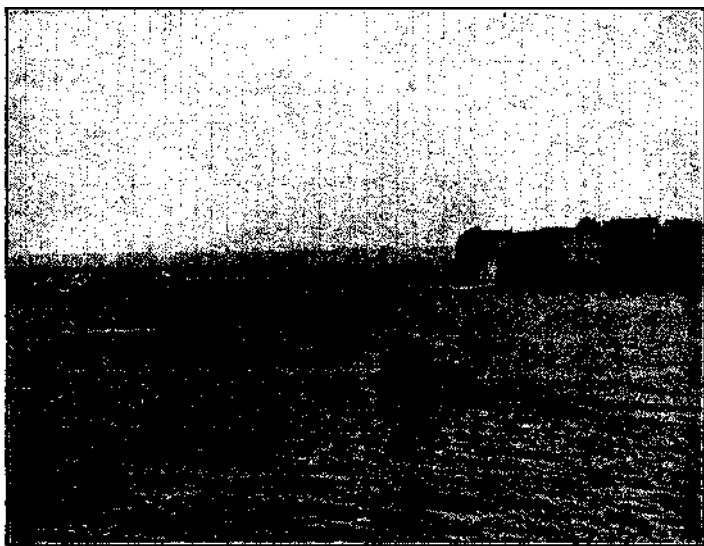
XXXII. Genoa

through the Alps (§ 10), the plain, and the peninsula. Trieste, on the gulf of that name at the head of the Adriatic Sea, is the port for the main railway from Vienna and central Europe by way of the Scmmering Pass in the eastern Alps. Along the foot of the Apennines, similarly placed, are Alessandria, Parma, Modena, and Bologna, with Rimini at the south-eastern point of the plain, where the Apennines meet the Adriatic coast. Other towns stand centrally in the plain—Pavia at the

junction with the Ticino ; Piacenza and Cremona at points where it was found easy to build bridges over the Po ; Mantua, once a strong town defended by arms of the Mincio ; Padua below the Euganean hills ; and lastly Venice on the coast, a wonderful city whose main streets are canals, on which steamers and boats (gondolas) go in place of omnibuses, carts, and cabs, while the buildings stand upon a group of islands in one of the lagoons which break the coast of the plain. This was a great port once, but is of less importance now, for the lagoon is shallow, and the island site is not fit for a modern commercial city. Genoa, on the opposite coast, approached by a low pass through the Apennines, is the chief sea-outlet for the plain and for a good deal of trade from countries beyond the plain.

95. In central Italy hardly any of the important towns are on the coasts, which are lacking in natural harbours : in southern Italy all the most important towns are ports. Leghorn, near the mouth of the Arno, has an artificial harbour : the Arno itself has silted up too much to admit large ships to Pisa. The positions of the chief inland towns should be noticed with regard to lines of communication ; they are also, in most cases, the centres of the richer agricultural districts. Florence is situated at the point where the Arno is crossed by the north-and-south line of communication along the depression which marks off the Apennines from the western foreland (§ 83). Perugia is placed centrally in the valley of the Tiber, which provides a route through the mountains, and so across to the east coast and the northern plain, from Rome, the capital. This most famous city stands on low hills about the lower course of the Tiber, where the river could be crossed, and where, also, the coastal lowlands provide a route north-west and south-east. Here is the seat of government of the

kingdom of Italy : here also, politically independent of the kingdom, the Pope as the ruler of the Roman Catholic Church lives in his palace of the Vatican. Naples, on the beautiful bay to which it gives name, has become a great port and commercial centre for the fertile territory of Campania. Bari is the largest of the Apulian coast towns ; but Brindisi and Taranto have



XXXIII. Taranto

become ports of greater importance to liners sailing by way of the Mediterranean and the Suez Canal to the east, which use both these places for mail and passenger traffic from or to Europe.

96. *Communications.* The principal lines of railway enter Italy from France along the Riviera coast and from the Alpine valleys (§ 10). From the northern plain (Turin, Alessandria, &c.) lines cross two low Apennine passes to Genoa, whence a line runs along the west coast

to Rome. A west-to-east line connects Trieste and Venice with Milan and Turin, and by branches with the line from Milan which skirts the southern edge of the plain (§76) and the Adriatic coast from Rimini southward to Brindisi. From Bologna on this route a line crosses the Apennines to Florence and follows the valley between the Apennines and the western foreland to Rome, proceeding thence to Naples, with a branch eastward through the mountains to the northern plain of Apulia. South of Naples there are lines to Taranto and around the coast of Calabria, connecting at Reggio on the strait of Messina with a train ferry to Sicily. The relation of these main routes in Italy with the relief of the land is a particularly instructive study.

97. *Agriculture.* The principal Italian grain crops are wheat and maize. Rice is grown on damp low lands especially in the Po basin. Macaroni and other such foods made from flour are a special Italian manufacture. The vine follows the chief grain crops as the next most important cultivation in Italy : the olive follows the vine. The vine is grown all over the country in suitable positions ; in some central and southern districts it may occupy as much as a fifth of the whole cultivated land. The best known Italian wines, however, come from the Tuscan hills and the Montferrato hills above the west of the northern plain. The olive is of little importance, as we have seen, in and around the northern plain, as the risk of frost is too great; and it needs a little shelter, even on the lower ground where it grows, as far south as Rome, but farther south again it needs none, and in some southern districts it covers a quarter or even a third of the cultivated lands. Olive-oil mills are numerous and the oil is largely exported. The cultivation of lemons, oranges, and limes, although important along the Ligurian Riviera coast, is more so in the south,

especially from Naples southward, around the lower coastal slopes of Calabria, and in the heel of Italy about Lecce. Irrigation is generally practised on the lands where the trees are grown. There is an export trade in the fruits, and also in lime-juice and lemon extract. The mulberry tree is grown in all parts, and silkworms are fed on its leaves, the manufacture of silk (§ 100) being large.

98. *Live stock.* Cattle, sheep, pigs, and goats are all numerous ; the sheep are found, as elsewhere in the Mediterranean region, moving in huge flocks from winter lowland quarters to summer upland pastures at the changes of season. Buffaloes are commonly used in the south as beasts of burden. The northern plain is agricultural rather than pastoral, but dairy-farming is largely carried on here and in districts around the plain. Gorgonzola and Parmesan cheeses, manufactured in Emilia, Lombardy, and neighbouring districts, are well known.

99. *Fisheries.* The fishing industry belongs chiefly to the Adriatic coast towns ; on the west, more particularly to the Ligurian shore, and coral and sponge fishing boats belong mostly to western ports, the coral being found principally off Sicily and Sardinia, and sponges off Sicily, Tunis, and Libya. Some of the coastal lagoons are rich in fish.

100. *Manufacture.* The chief manufacturing districts are in the northern plain (§ 34), but there are important manufactures elsewhere also. Large mechanical workshops are found in Turin (notably for motor-cars) and other northern towns, and in Naples, &c. The production of raw silk and the manufacture of silk goods are carried on principally in Lombardy, Piedmont, and Venetia. Cotton is manufactured principally in Lombardy, Piedmont, and Liguria, and woollens in Piedmont, Venetia, and Lombardy, but both industries

extend into central Italy. Textile industries using flax, hemp, and jute, are important also. Straw-plaiting is carried on, principally in Tuscany, and largely by women throughout the country in their homes ; from the produce hats are made in factories. Some parts of Italy are famous for artistic industries—Venetia and Tuscany for glass; Florence, Faenza, and other towns for



XXXIV. Etna in eruption

fine pottery; Rome (at the Vatican and elsewhere), Florence, and Venice for mosaics ; Rome for jewellery and small ornaments, made, for example, of coral or lava. Of Italian exports, silk and silk goods make up a quarter or more of the total value, and are followed by cotton and its manufactures, hemp, wines, motor-cars, sulphur, olive-oil, fruits, preserved vegetables, &c.

101• *Sicily*, the largest island in the Mediterranean (nearly 10,000 square miles) forms a triangle separated

Sicilians are fishermen. The chief towns and ports are Palermo, Messina, and Catania.

103. Sardinia. The island of Sardinia is south of Corsica, separated from it by the Strait of Bonifacio, eight miles wide. It is mostly mountainous, with heights up to 6,000 feet ; but a narrow lowland extending from the middle of the west coast to the south-east divides the main mountain system from another, smaller, in the south-west. Although some parts of the island are fertile and grow the usual Mediterranean products, most of it is rocky, wild, and desolate, and the scenery though fine differs greatly from the softer beauties of the Italian peninsula. The lowlands suffer much from malaria. The inhabitants show the usual results of isolated life on a mountainous island. Except where they are most closely in touch with outside influences, they speak dialects so different as not to be understood even between one district and another, and containing (in some cases) Latin words unaltered ; they also wear characteristic costumes, which again differ from one district to another.

The south-west of the island is fairly rich in minerals, producing chiefly lead and zinc. There are rich fisheries off the coasts, but they are worked by boats from the Italian mainland ; it is another natural result of the isolated mountain-life that the Sardinians are not fishermen as a rule. A good deal of live stock is kept on the mountain pastures. The chief town and port is Cagliari in the south.

104. Malta, an island less than twenty miles long and eight in greatest breadth, with two smaller islands adjacent, has a wonderful situation commanding the passage between the western and eastern Mediterranean, which is only eighty miles wide between Sicily and **Africa**. Not only so, but it has a fine **natural harbour**

on which the capital (Valletta) and other towns are situated. Its importance in relation to sea communications is immense ; and it belongs as we saw (§ 3) to Britain. Its southern part is a high, cliff-bound plateau; the north is lower and more broken. It consists of limestone, dry and porous, light of colour and glaring in the sun ; and trees are very few. Water is reached by



XXXVI. Valletta, Malta

wells, or stored in tanks, or carried from springs by aqueducts, for there is none on the surface. Fertile soil must be carefully preserved and kept in place by walls. Yet the island yields a fair amount of crops such as wheat, barley, and fruits (oranges, figs, &c.), and exports early potatoes, onions, and other vegetables to places where they only mature later. But the island is very densely populated—apart from great town areas there probably is not in Europe a more densely populated

district of the size of Malta. It is not self-supporting in production generally, and there are much poverty and emigration in spite of the trade connected with the garrison and naval establishment and the coaling and supply of calling ships. Maltese emigrants are carefully regulated according to physical fitness ; nevertheless, their number is large—it is estimated that 17,000 Maltese left the island after the great war. They go as farmers to Canada and Australia, with a few to the south of France. Others are seamen, mechanics, and labourers, and there are many of these, not only in France, Algeria, Tunis, and Egypt, but also in other parts of the world, notably the United States, where Maltese colonies in Detroit and San Francisco may be specially mentioned*

VII

THE BALKANS AND AEGEAN

105, *The Eastern Adriatic Seaboard.* We return to the Adriatic. The chains of limestone mountains which extend south-eastward from the north-east corner of the plain of Venetia (Italy) run generally parallel to the east coast of the Adriatic Sea throughout its length, and on into the Greek peninsula (§107). Other parallel but partly sunken folds form the wonderful chain of islands which fringe this coast, and the coastal belt of the mainland is very narrow, and has few valleys opening on to it from the interior.' Therefore Yugoslavia, the State of the South Slavs (Serbs, Croats, and Slovenes), whose capital is Belgrade, far inland at the junction of the Save and Danube, has only difficult access to the Mediterranean by railways which descend from the interior to the ports of Sebenico and Spalato (Split), Ragusa (Dubrovnik), and Zelenika. But the

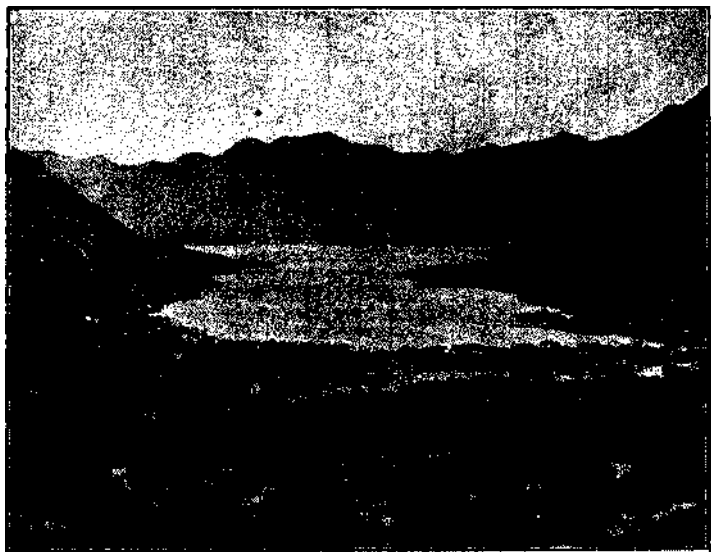
islands shelter the channels between them and the mainland for navigation ; there is a fair amount of cultivation and dark woodland (especially on the islands and higher parts) contrasting strongly with the light glaring limestone ; there are fisheries, and both islands and mainland have a considerable population and many



XXXVII. Eastern Adriatic seaboard (Hagusa)

small ports. Here Italians meet Slavs. Fiume, on the mainland at the northern end of the island-chain, was once Hungary's sea outlet and has a railway to it ; it now belongs to Italy. Zara, farther south along the coast, has many Italian inhabitants and belongs to Italy. Beyond the southern end of the island-chain (usually known as the Dalmatian islands from the name of the coastal territory, Dalmatia) the Gulf of Cattaro penetrates the mainland, a wonderful branching inlet set about with mountains, and well fitted for a great

port if there were easy access to it from the interior. But from Cattaro at its head only a winding road climbs up to the high isolated territory of Montenegro—so steep are the hills that a cable line has also been used for the transport of goods. Farther south again, so wild is the interior country, with its high parallel ranges



XXXVIII. The Gulf of Cattaro

separated by deep narrow valleys, that no railway nor even a good road crosses it to Serbia, the eastern part of Yugoslavia, though the Romans (§175) had one from the port of Durazzo, and it has been planned to build a railway eastward from Valona, a port farther south at the entrance of the Adriatic (§ 106), to connect with the lines from Belgrade by Nish to Athens and Constantinople.

106. Albania. Here, in the mountains which rise behind a narrow and marshy but fertile coastal plain,

the isolation of the country owing to difficulty of access has enabled a very ancient people, the Albanians, to maintain independence. These now, in name at least, form a State under a Council, of which two members belong to different branches of the Mohammedan religion and two to different branches of the Christian (Roman Catholic and Greek). For hereabouts, in eastern Yugoslavia and Albania, we find the meeting place of Christianity and Mohammedanism ; and not only Albania but even its different parts are so isolated that the people profess different faiths, and live in separate clans or under different chiefs who, until lately at least, have often been enemies one of another. Albania has been one of the least known parts of Europe in the geographical sense.

The most important sea-entrance to this difficult country is the Bay of Valona, opposite the heel of Italy. The small island of Saseno commands the entrance to this bay and to the Adriatic, and is occupied by Italy.

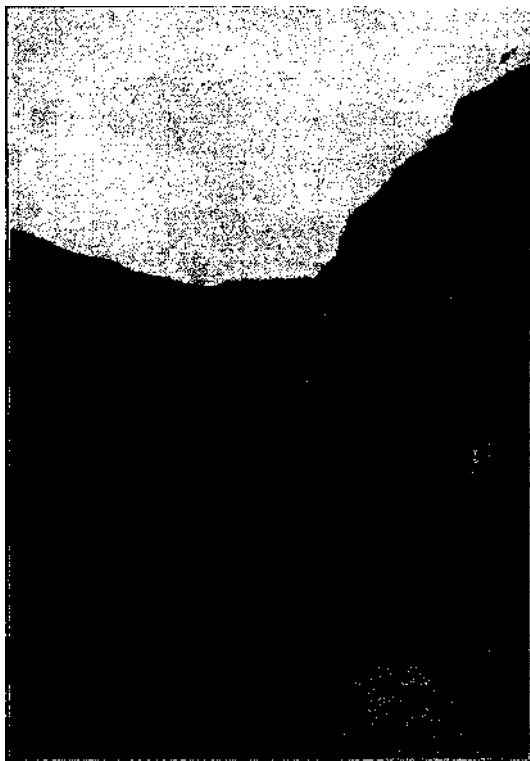
107. *The Greek Peninsula.* The Balkan Peninsula is usually taken to be the whole of the country which lies south of the Kulpa, a tributary of the river Save rising in the mountains east of Istria, the Save itself, and the Danube downward from the point where the Save joins it. The States which lie, mostly or wholly, south of that line are known together as the Balkan States (Yugoslavia, Albania, Greece, Bulgaria, European Turkey). But, as a map will show, this line of rivers does not mark off what is really a peninsula in proper geographical sense. The truly peninsular part lies south of a line (not defined by a particular range of mountains, or rivers, or any other natural feature) between the south end of the Adriatic Sea and the north-west corner of the Aegean. This peninsula includes Albania and most, but not all, of Greece.

Greek territory extends also over most of the northern seaboard of the Aegean, and of the islands in that sea, and southward to Crete.

108. It is therefore possible to divide Greece, as we divided Italy, into a continental part, a peninsular part, and the islands belonging to it : but in our progress from west to east we take the peninsular part first. It is not possible to make much of a comparison between the form of the Greek and Italian peninsulas, except that both are mainly mountainous. There is indeed, in the north-east of the Greek peninsula, a low plain—the plain of Thessaly—which is the most important in the peninsula, and is encircled by mountains except where it drains eastward to the Aegean : to aid memory, we may compare this plain with that of the Po in northern Italy, which opens eastward to the Adriatic ; but there is little resemblance between them in size or physical structure. As for the map of Greece, there are no tricks worth learning for help in drawing its intricate outline. It can only be learnt by looking at it—hard.

109. Relief: *The North-East* The mountain folds which run mainly parallel to the east coast of the Adriatic Sea are continued through the Greek peninsula, rather less clearly, on the whole, as far as concerns their parallel arrangement, as they proceed south, and trending progressively south-eastward so as to lie across the peninsula. One of them, however, starting from the base of the peninsula, forms a main range, somewhat west of its centre. Its middle part, which rises to 7,800 feet, is called Pindus. It sends off branches to the east, two of which enclose the Thessalian plain. From the northern edge of this and from the Aegean coast, the famous Mount Olympus rises to 9,800 feet, with thick woods covering its lower slopes, which are **broken** by deep ravines and precipices. The plain is cut

off from the sea by the Pelion range with Mount Ossa at its northern end, and between Ossa and Olympus the Peneius river drains the plain through the Vale of Tempe,



XXXIX. The Vale of Tempe

a gorge walled with cliffs up to 1,500 feet high, which forms an important natural line of communication between peninsular Greece and the north: the only railway connecting Greece with the European railway system passes through it. The Thessalian plain has two divisions of flat fertile soil, separated by low hills which also are cultivated.

110. The Othrys mountains (3,800 feet) a broad range of easy slopes, grown over with oaks and maquis scrub, border the Thessalian plain on the south and separate it from that of Lamia in the valley of the Spercheius. From the head of this the main mountain system of the peninsula runs south-east in steep ranges broken by wild gorges, with such heights as Mount Parnassus (8,000 feet) and others higher. Narrow plains are found in the valleys east of it, such as that of the Cephissus, which reaches the sea only through a subterranean channel, and once formed the lake Copais above them. By cutting canals and tunnels in addition to the natural outlet this lake was drained, and its bottom is fertile cultivated land.

111. The mountains fall south-eastward to lower heights in the peninsula of Attica, in which is situated Athens, the capital of Greece. Lowlands and sparsely wooded vales break up the ranges, and the peninsula ends in the rugged hills of Laurium (Lavrion), the richest mineral district in Greece.

112. *Euboea*. Close off the coast of this part of Greece, south-eastward from the seaward end of the Othrys mountains, lies the long island of Euboea. It has forested hills and fertile valleys in the north ; the centre and south are wilder and higher ; and the south especially is dry, barren, and desolate.

113. *Pindus and the North-West* The main range (Pindus, &c.) is a country of cliffs and narrow gorges, forested in many parts, little inhabited, and crossed by a few difficult paths which provide the only communication (except by sea) between the east and the west of this part of the peninsula. The west country is as a whole less populous and important, and these difficult tracks are not much used, though it is notable that the chief of them have fine old bridges across the streams,

no The Balkans and Aegean

high-arched and narrow. The country west of the main range consists of lower ranges, generally parallel, of dry limestone mountains, rough and bare, with steep sides and rounded tops, separated by tracts of sandstone hills with trees, bushes, and running streams. These in their lower courses form alluvial valley-floors, which are sometimes marshy, but otherwise fertile, and contain most of the population of the region. The most extensive plain is that of Arta, which borders the west coast and the lagoon-like gulf of that name.

114. *The Peloponnese.* The peninsula of the Peloponnese or Morea is joined to the rest of the Greek peninsula by the isthmus of Corinth, which is less than four miles wide at its narrowest part, where it is low, and is crossed by the Corinth canal between the heads of the Gulfs of Corinth and Aegina.

The Peloponnese is generally mountainous, the highest points reaching from 7,000 to nearly 8,000 feet in the Taygetus range of the south-central part. The peninsula throws off a long promontory to the east (Argolis) and three to the south, separated by the deep gulfs of Nauplia, Laconia, and Messenia. Argolis and the two southernmost promontories, which end in capes Maica and Matapan, consist largely of dry limestone uplands, with steep slopes or cliffs to the sea : they are isolated by nature, and their few inhabitants are the same ; those of Maina (the promontory of Cape Matapan) especially live a life of their own in fortified houses—for the vendetta is still practised among them as in the wilder parts of Corsica—remote from outside influence and even governed with difficulty. The whole eastern part of the Peloponnese tends to be dry : the rainfall in the east is less than half that in the west, and only a few of the largest rivers flow all the year. Others dry in summer and many run underground at the foot of the limestone

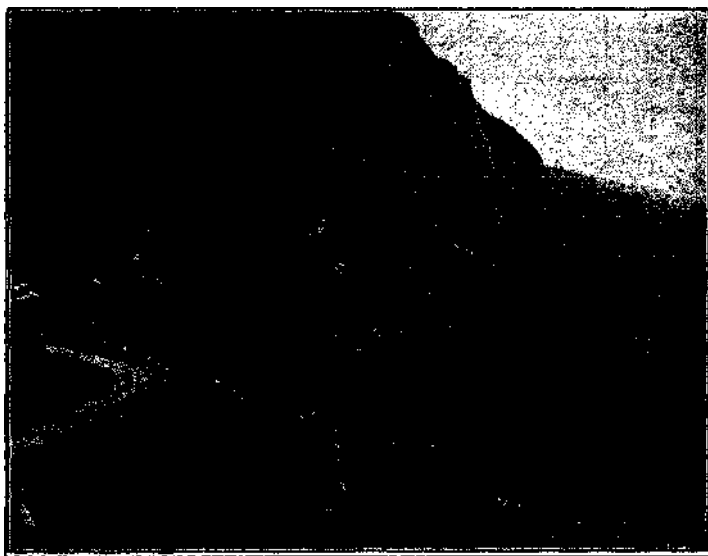
hills, so that water must be got from wells, as in the plain of Argos at the head of the Gulf of Nauplia, or stored in cisterns as in the Parnon region of the south-west. The narrow lowlands of the main valleys opening south are sometimes fertile and well cultivated (as around Sparta and Kalamata), but are commonly marshy toward the coast; in the interior, away from the moderating influence of the sea, they are subject to extremes of summer heat and winter cold. The mountain slopes are in parts thickly wooded with oak and fir, but more usually bare or dotted with dark scrub. They are cut by deep ravines, especially on the west (rivers Alpheius and Ladon) and north, where the wild gorge of the Styx has a name which was even terrible in classical tradition. The richest parts of the peninsula are the coastal lowlands of the west and north (Gulf of Corinth). Here chiefly flourishes, up to a height of about 1,000 feet above sea-level, the small-fruited vine which yields currants, the principal export of Greece, of which the name is a corruption of Corinth. These important currant-growing lands are not always held by people who live on them, but sometimes by dwellers in inland towns of the Pcloponnese, which have no such rich soil close by.

115. *The Ionian Islands* lie off the west coast of peninsular Greece : the chief of them are Corfu, Cephalonia, and Zante. They are mountainous and beautiful, though in Corfu the foliage of the olive trees which cover large parts of the island gives a monotonous colour to the scenery. Similarly in Cephalonia dark pine woods give name to the Black mountain, the highest point of the islands (5,300 feet). On Cephalonia and Zante currants are extensively grown. Near Argostoli, the chief town of Cephalonia, there is a chasm through which the rush of sea-water is made to turn mills—an unusual use of water-power.

112 The Balkans and Aegean

The island of Kythera or Cerigo, south of Cape Malea, is high and steep, but its little valleys and plains among the hills are fertile, and yield wine, fruits, and hemp and cotton for export : hares, rabbits, quail, and sea-fish are abundant.

116. *Vegetation.* From the preceding description we get a general impression of peninsular Greece as a rather



XL. Limestone and shrubs (Delphi)

wild and desolate, however beautiful, country ; and in large part it is so. About an eighth of the whole area is forested, and about a fifth cultivated. This would leave about a third to the bare dry slopes of limestone country, which, especially in the east, grows little, if anything, but the grey prickly shrub *phrygana* or *pournaria* (which will only feed goats), and to stretches of a *maquis* scrub of myrtle, oleander and gorse, and to marshes,

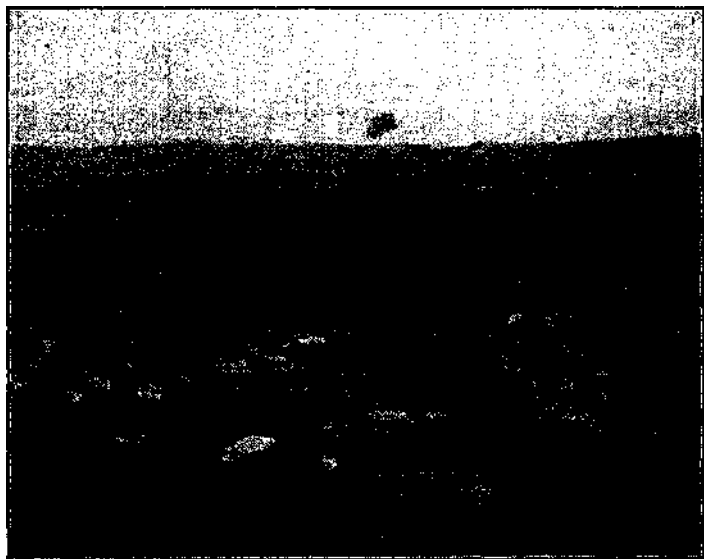
especiklly about the mouths of rivers. Forests are found principally in the west and north, where the rainfall is heavier than in the east. This ranges, for example, from about 50 inches annually in Corfu (Ionian Islands) and Yanina (Epirus) to 19 inches at Nauplia (Argolis) and 18 inches at Volo (Thessaly). In the Pindus region oaks flourish on the lower slopes, up to about 2,000 feet above sea-level; beeches, hornbeams, and chestnuts up to 4,000 feet, and silver-fir up to 5,000 feet or more. Similarly in the Peloponnesc the oak is the principal forest tree of the lower slopes, and that chiefly in the west; at the middle heights, up to 3,000 feet, various pines are common in the west and north, and again the silver fir is found higher than the rest, from 2,000 up to 5,000 feet. As elsewhere in Mediterranean lands, the destruction of forest has resulted in much of the soil, unsheltered, being washed off the hill-slopes by heavy winter rains.

117. *Agriculture and Pasture.* The principal agricultural districts are (i) the plain of Thessaly, where wheat, barley, maize, cotton, and tobacco are grown, with olives, oranges, and lemons on the coast lands. Some cattle-ranching is also carried on in Thessaly. In the eastern valleys and coast lands farther south there is a considerable amount of cultivation of the same crops, and mulberry trees are grown for the feeding of silk-worms on the leaves. The drained bottom of Lake Copais (§ 110) is specially fertile. Vines are grown for wine, and the currant vine appears in the Chalcis district of Euboea. The limestone of the Pindus country is mainly pastoral, the shepherds taking their sheep and goats to the uplands in summer, and to lower meadows in the valleys or to the Thessalian or other plains in winter. The alluvial river-valleys of the west grow the crops already mentioned, and a little rice is cultivated

114 The Balkans and Aegean

also ; the meadows of the sandstone districts feed cattle and horses. Tobacco is grown in Acarnania.

In the Peloponnese, we have already noticed the importance and distribution of the currant vine. The valley at the head of the gulf of Messenia, with Kalamata as its port, is one of the most fertile parts of Greece,



X L I. Messenia, Western Peloponnese

noted for olives, fruits (especially figs), and wine, in addition to the currant. Mulberries are grown to feed silkworms. There is a fairly dense population even in some of the less favoured parts of the Peloponnese, as in the Arcadian hill-country where soil is scarce, and must be terraced and preserved with great care. In many parts of Greece, water, also, is too scarce to be used for irrigation, unless for the most valuable crops.

118. *Minerals.* Greece is not rich in minerals. The

principal mining district is Lavrion in the east. Iron and silver-lead are the chief minerals obtained, together with emery from the island of Naxos. At the south end of Euboea coal of fair quality is raised to supply local steamers and railways ; coal is also found on the opposite mainland and at Brouma (Olympia) in the middle west of the Peloponnese, near the coast. In central Euboea is an important supply of magnesite, sent to other European countries for the manufacture of crucibles and furnace-linings. The marbles of Attica, Euboea, Thessaly, and Paros are noted.

119. *Population.* The population of peninsular Greece is about three millions, which means a low average density—110 per square mile ; and over a great deal of the country it is very much less than this. The average is rather higher in the Peloponnese than in the north, and there is a remarkable difference between some of the islands ; for instance, the average is 292 in the moist and fertile Ionian Islands, but only 53 in the drier and wilder Euboea.

The Greeks or Hellenes are descended from the Greeks of classical times, though there has been some later mixture with Italian, Slav, and other peoples. There are also pure Albanians to the number of 200,000 or more ; they live mostly in Attica and other eastern divisions, southern Euboea, the islands of Salamis and Hydra, and the east and north of the Peloponnese. They are country folk, not town dwellers, and they largely inhabit the wilder parts of the country, as might be expected from the conditions of Albania itself (§ 106). These Albanians are all Christians, but they keep their own language and customs and do not mix much with the Greeks. In addition there are Greek-speaking Albanians in the north of Epirus, adjacent to Albania itself. From the district of Acarnania in the west, north-

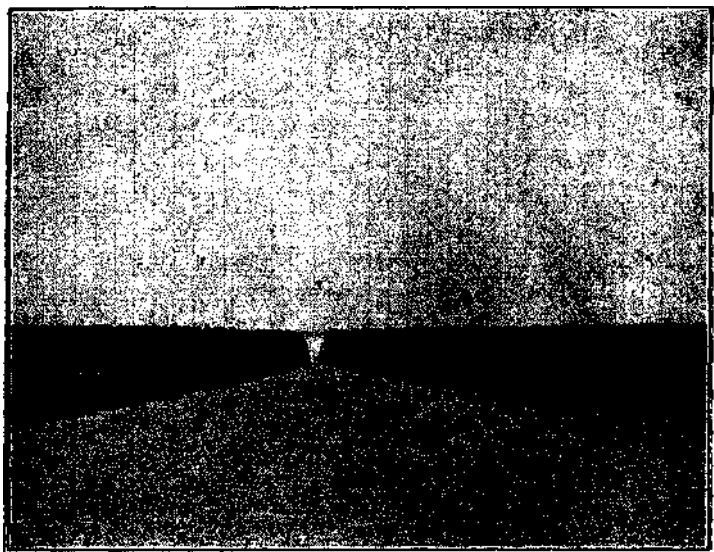
eastward through the Pindus region and into Macedonia, there are scattered bodies of shepherd Vlachs. These are relations to the Rumanians north of the Danube, and speak a language like theirs ; and how or when they came into this part of the Balkan lands, cuj. off from their own people, nobody knows. They diminish in numbers, but the fact that they survive at all is another example of the result of geographical isolation. They wander with their sheep and goats between the mountain pastures in summer and those of the lowlands in winter. In Greece generally, as elsewhere in Mediterranean lands, pastoral industries have nothing to do with agricultural—the lands suited to each are separate and distinct.

120. *Occupations.* About two-thirds of the whole population of Greece live by agriculture. A large number of the rest are sailors and fishermen. This has its geographical reason in the long indented and sheltered sea coast and many islands, which cause their inhabitants to look to the sea for their living. The interior of Greece, as a whole, is difficult to enter and traverse, so the country people are not much influenced from outside, and keep their peculiar national dress (which is different from that of the Greeks in the Aegean islands) and many customs and superstitions which date in origin from before Christianity. Many of the men emigrate to America from districts where agriculture is difficult, and women work the land.

The chief industries are the making of olive-oil, wine, -cotton, and silk goods : the spinning of wool, and of cotton where it is grown, is largely done in the country homes. There is no big manufacturing industry like those of northern Italy, although the water-power of the Gorgopotamos river has been used for chemical manufacture at Lamia. The chief exports are currants, figs,

and other fruits, olives and olive-oil, tobacco, oranges, and wine.

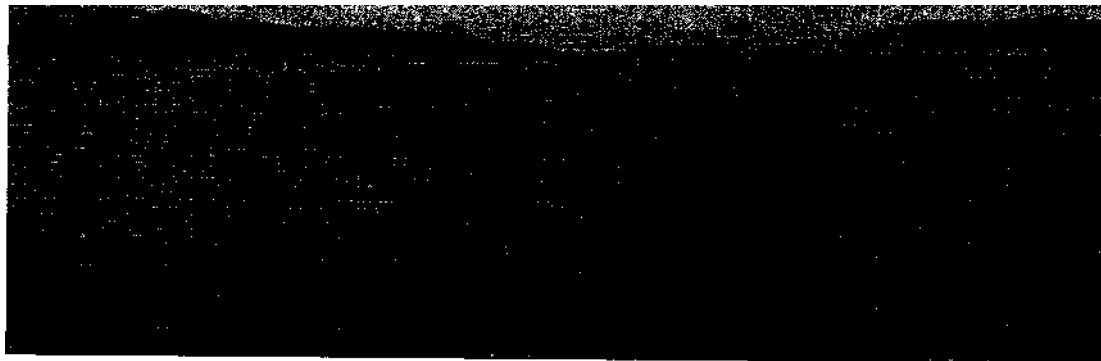
121. *Communications.* The railways of Greece are connected with the European system generally through Salonica (§ 10). Main lines run south through the eastern part of the peninsula to Athens (standard gauge), along the isthmus of Corinth, and from Corinth (narrow gauge)



XLII. Isthmus of Corinth and canal

in a circle around the north and west coasts of the Peloponnese and through the centre of that peninsula with a branch to the south-western port of Kalamata. Western Greece, north of the Gulf of Corinth, is only reached overland, as we have seen, by difficult paths from the east, so that the Corinth Canal and the Gulf of Corinth make a very important line of water-communication.

122. *Towns.* Most of the largest towns of Greece are



XLIII. The Dardanelles

seaports. Athens, the capital, is not; but it is only four miles from Piraeus its port. Piraeus is by far the most important port of Greece : the foreign trade and the extensive system of steamer-communication with other Greek and Levantine ports and the islands are centred here. Other ports are Patras on the north Peloponnesian coast, Corfu, Argostoli on Cephalonia island (§ 115), and Volo in the north-east; and all these towns are larger than the largest inland town, Larissa on the Thessalian plain. Kalamata is the port of fertile Messina (south-western Peloponnese), and Katakolo in Elis (western Peloponnese) has a big export of currants.

123. *Salonica*. Rugged mountainous country extends right across the base of the Greek peninsula, from Albania to the west coast of the Gulf of Salonica, which is in the north-west corner of the Aegean Sea ; and the railway runs close to the sea, along the steep slopes, after leaving the Vale of Tempe. Then, at the head of the gulf, the river Vardar enters through the marshes which fringe the coast of the Macedonian plain. This is a very fertile district, of immense importance as an outlet to the Aegean from Serbia and central Europe; for the Vardar valley, which opens upon the plain from a narrow defile, has always provided one of the few natural main lines of communication north and south through the Balkan region (§ 10). A railway runs through it to the great port of Salonica at the head of the gulf.

124. *Chalcidice*. The east coast of the gulf of Salonica is formed by the peninsula of Chalcidice, which is something like the Peloponnese on a small scale, being mountainous, and throwing off three high promontories to the south-east, separated by two long gulfs. The whole peninsula is marked off from the mainland, not indeed by a sea-gulf like that of Corinth which bounds

the Peloponnese, but by a depression partly filled with lakes. Chalcidice is well wooded and cultivated in parts, and is mostly inhabited by Greeks and a few Turks. But in the eastern promontory of Mount Athos (or Hagion Oros, the holy mountain) we have a new kind of example of that geographical isolation which we have noticed several times before. For here lives a community of about 7,500 Christian monks, a religious republic in itself, but in nationality mainly Russian and Greek, with some Bulgars, Rumanians, Georgians, and Serbs. No women are allowed in this community, nor even cows or hens. These men cultivate the slopes of their holy mountain, which is covered with orchards, vineyards, and woods : on its bare top, 6,350 feet above the sea, they have a church.

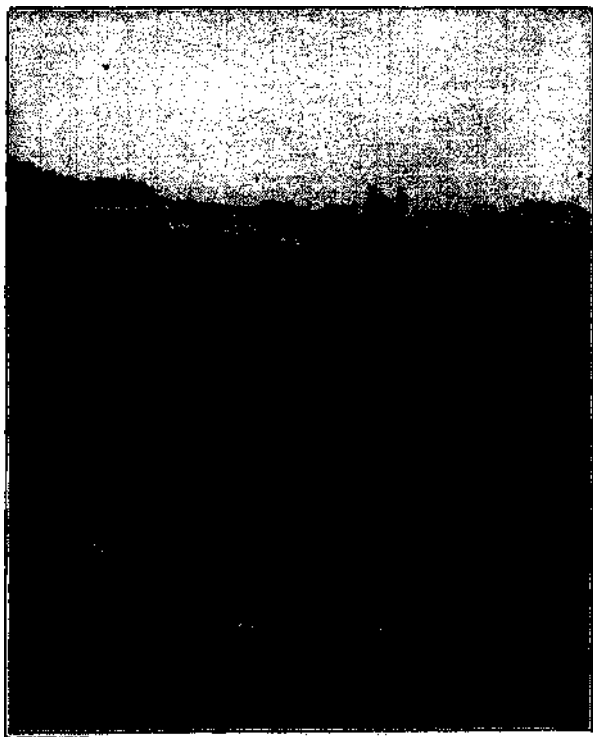
125. *Macedonia and Thrace.* A narrow foreland, partly low plain, partly hilly, extends along the north coast of the Aegean Sea eastward from Chalcidice to the mouth of the river Maritsa in the north-east corner of the sea. To the north are the rugged mountains of Rhodope, which range from 9,500 feet in the west to 4,000 in the east, and may almost be compared with those of Albania for difficulty of access. The foreland, therefore, has long been a great natural main line of communication east and west between sea and mountains : the Salonica-Constantinople railway follows it now. It is the more important as a land route because there is no good port upon it. Here, as was seen in § 29, we have geographical reasons for the fact that the population is mixed—Greeks mostly, but also Serbs, Bulgars, Turks, Vlachs, and a few Albanians are found; and the territory, now Greek, has been often in dispute. At the port of Salonica all the peoples of the Mediterranean may be met, and Spanish Jews are powerful traders here (§ 32). The foreland has an important cultivation of tobacco,

for which Kavalla is a centre for manufacture and fexport.

126. *The Maritsa, Dardanelles, and Bosporus.* The Maritsa valley, with the poor port of Dedeagach to the west of it, forms a natural outlet to the Aegean from Bulgaria, whose territory consists, in great part, of the basin of the river. Farther east the high peninsula of Gallipoli and a hilly district belonging to Turkey, between the Aegean and Black seas, border the small Sea of Marmora and the straits which give access to it—the Dardanelles from the Aegean, the Bosporus from the Black Sea. These three together, we have seen (§ 10), form one of the great gateways to the Mediterranean* Here, on the European shore of the Bosporus where it enters Marmora, is Constantinople, long the Turkish capital, not only the guardian of the Mediterranean Black Sea gateway, but also terminus of the Orient railway route from Europe, and the ferry-point across the Bosporus between Europe and Asia.

127. *The Aegean Sea* used to be called The Archipelago—perhaps meaning the 'principal sea' of the Greeks, but there are other derivations: from this the term 'archipelago' has come to be used of any group of many islands. The Aegean islands are arranged, at least in part, in chains which suggest sunken ranges of mountains connecting those of Greece and Asia Minor. One such chain passes from the south-eastern promontory of the Peloponnese through the islands of Cythera, Crete, Carpathos, and Rhodes, and marks off the Aegean from the outer Mediterranean. The deep Cretan Sea within this chain is bounded on the north by a chain of volcanic islands: none is active, though hot springs are found, and the volcano form is well seen in the islands of Milos and Santorin, broken circles of high land with deep sea inlets representing the old craters. Farther

north a ring of islands surrounds Delos, and of these the northern are continued as a chain through Andros, Tenos, Mykonos, Nicaria, and Samos between Euboea and Asia Minor. All those islands north of the Cretan Sea are called



XLIV. Santorin

the Cyclades ('grouped' or 'clustered islands'), except those toward the coast of Asia Minor which are called the Sporadcs ('scattered' like seed), of which a group of twelve north-west of Rhodes are called the Dodecanese ('twelve islands'). North-east of Euboea are the Northern Sporadcs, and in the north-east of the sea are several larger

islands—Lemnos, Imbros, Samothrace, and Thasos; with Tenedos, Mitylene, and Chios close off the northern half of the west of Asia Minor. The islands are usually high and steep: they make the scenery of the Aegean beautiful, but its navigation difficult, although they have many natural harbours. There are fertile valleys and small plains in the larger islands, and they produce wheat, wine, oil, figs, raisins, tobacco, cotton, silk, and honey; marble is quarried in some of them, and emery is obtained in Naxos. The sea yields coral, sponges, and fish. Ceos and Syra (but Syra less than formerly) are of some importance as coaling stations for Aegean shipping. The chief geographical interest of the islands lies in their having helped the seafaring interests of the Greeks; the inhabitants are almost entirely Greeks, and of a type more like those of classical times than the inhabitants of the mainland. There are a few Albanians in Andros, Italians and Maltese in Syra. Most of the islands belong to Greece; but there is an Italian protectorate over Rhodes and neighbouring islands.

128. *Crete*, one of the largest Mediterranean islands, has mountains up to more than 8,000 feet, rising in four main masses along its length. Snow lies on some of them all the year in sheltered spots. Their upper slopes are bare, the former forests having been mostly destroyed. They are scored with deep ravines, narrow and cliff-bound, and there are many caves. Southward they slope steeply to the sea; northward the slope is more gradual; there are level upland basins with summer pasture, and the valleys toward the north, and plains along the north coast, are very fertile, and grow olives, oranges, lemons, vines, and other fruits, mulberries, and chestnuts for export. The southern valley of Mersara contains the chief corn lands. There are several fine natural harbours on this coast, notably Suda Bay, near which is the town

of Canea ; the other chief towns are on this coast, and a fairly dense population inhabits the northward slopes. It is Greek, but the Christian and Mohammedan religions mingle in the island, for there are a few Mohammedan villages, and often Turks in the towns, though they mostly claim Italian nationality.

129. *Cyprus*. We may complete the list of Mediterranean islands by glancing at Cyprus before returning to the mainland. This is a large island in the north-east corner of the eastern sea, belonging to Britain. It consists of two mountain-ranges with a plain between, on which stands the capital, Nicosia. The soil is porous, and, as elsewhere, forests which used to preserve the moisture in the soil have been destroyed. But a good deal of work has been done in modern times to conserve forests, and to preserve water from the winter rains for irrigation in summer; and grapes and other fruits, carobs or locust beans, grain and cotton, are grown. Tobacco, and sumach used in tanning, are of some importance. There are sponge fisheries, and asbestos, salt (at Larnaka), and a little copper are obtained. The island was so famous for copper in early times that it gave its name to it, 'copper' being derived from the Latin (*aes*) *Cyprium*, Cyprian metal. The island has a population of more than a quarter of a million, of mixed origin but mainly Greek ; about a fifth are Turks living either in the towns or in villages of their own. The ports are Larnaka, Limassol, and Famagusta, all on the south-east coast, the last being connected by a railway through the central plains with Nicosia and places farther west. Cyprus serves as a summer health-resort for Egyptians and Greeks in the Eastern Mediterranean.

VIII

ASIA MINOR AND THE LEVANT

130. *Asia Minor* is the oblong mass of land between the Black, Aegean, and eastern Mediterranean seas, and is usually taken to extend eastward to the upper Euphrates river. This represents the greater part of the Turkish territory in Asia, which extends, however, beyond the Euphrates to the boundaries of the mountainous wild country of Kurdistan and Armenia. The name of Anatolia is sometimes used as an equivalent to Asia Minor, but does not properly include the southern part.

131. Relief. Asia Minor consists of a plateau from 3,000 to 4,000 feet above sea-level, surrounded on the north, east, and south by a rim of mountains. On the west also there is a rim, but it is lower and broken, and long valleys and low separating ranges run down from it to the Aegean coast. Asia Minor is often likened to a bridge between Asia and Europe, and so it has been used continually in history. The western slope belongs to the Greek and Aegean region of the Mediterranean. The northern and southern mountain-rims are like the parapets of the bridge ; they mark off narrow coastal regions, north and south, very different from the plateau region (and from each other). The passages from the plateau eastward, and south-eastward into Syria, are through difficult mountain country.

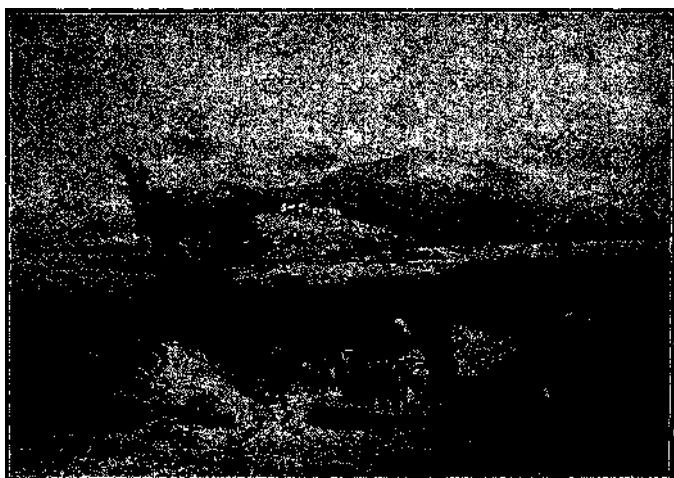
132. The Central Plateau. The eastern and larger part of the plateau is a very level plain, broken by cone-shaped mountains mostly of volcanic origin. One of these, Erjish Dagħ south of the town of Kaisarieh, is the highest peak in Asia Minor, over 13,000 feet. There are no active volcanoes, but there are other volcanic signs, such as hot springs in many parts, especially on

128 Asia Minor and the Levant

the Aegean slopes, where also earthquakes are not uncommon. The western part of the plateau consists of rolling country with wide valleys. The level limestone plain is dry, except at the spring season of rain, when its surface is turned to mud. Great part of it has no trees, and only a steppe vegetation, though it was productive enough in early times, yielding much grain and wool. Large cisterns and dams were built to store water : through centuries of bad Turkish government these have gone to ruin. But as a whole it is not the desert it is sometimes called, though there is a large area of inland drainage, mostly to the big, shallow, and very salt lake called Tuz-gol. The western part of the plateau, however, has some rain at all seasons, and the valleys are fertile. The winters are hard, and snow lies long and deep, sometimes so late in the year as to cause much loss among the big flocks of sheep and lambs which are pastured on the high plains.

133. *The Northern and Western Margins.* The northern rim of the plateau consists of ranges of mountain parallel to each other and to the Black Sea coast, to which the outer ranges fall steeply. Rivers which water the deep valleys between the ranges turn north and break through the outer range to the sea. As this description suggests, there are few easy ways of access to the plateau from this side : the chief routes are from the Black Sea ports of Samsun and Trebizond (Armenia). This northern region has little to do with our Mediterranean lands. But it should be noticed that in its eastern part, which probably gets some shelter from the cold winds of Russia owing to the position of the Caucasus mountains, the olive reappears, as the map of its distribution shows* It may be observed also that until the wars of 1914 and after, the chief economic interests of the north-west of Asia Minor were Greek.

On the west the rim of the plateau is broken by the valleys of rivers rising on the plateau itself. These rivers follow long courses to the Aegean Sea through valleys separated by low ranges, which end at the coast and do not prevent easy access to the plateau from the west. One of the larger rivers, the Menderez, was known in ancient times, and still is, as the Maeander, and from



XLVII. Asia Minor : western margin of plateau (Ephesus)

its windings in parts of its course the verb ' to meander ' has come into our language; and in geography a deep bend of any river is sometimes called ' a meander '.

134. *The Taurus.* The mountain rim on the south approaches close to the sea as a rule, leaving coastal plains only around the Bay of Adalia, and at the north-east corner of the Mediterranean, where the Cilician plain is situated. Here, as we have seen in other Mediterranean lands, limestone foothills are pierced by rivers in underground channels, called *dudens*, especially

in the neighbourhood of Adalia. In one instance a large stream (the Gok Su) actually flows underneath two of its own tributaries, which are on the surface. The southern mountain-rim consists of the Taurus system of mountains, a broad belt, fifty miles or more across, which is rather to be described as a plateau higher than the central plateau, with a whole series of ranges rising from it. The highest points of Taurus are about 11,500 feet. North of the Cilician plain, a great range called the Anti-Taurus sweeps to the north-east, and walls in the central plateau on the east.

135. *Minerals.* The mineral wealth of Asia Minor is known to be large and varied, but under bad government not much use has been made of it. Chrome-ore, silver, zinc, copper, borax, meerschaum, emery, and salt, are among minerals which are or have been worked, and there is coal at Heraclea on the Black Sea.

136. *Vegetation and Agriculture.* The contrasts of climate between north, centre, and south and west (§ 20) have their parallel in the contrasts of vegetation. Thus while both northern and southern mountains have forests of oaks and firs, the northern slopes have a greater variety of forest trees, including pines, cedars, and beeches. Here too flourish such temperate fruit-trees as the apple, pear, plum, and cherry ; in the south and west their places are taken by the fig and olive, and in the south especially, the orange, lemon, and citron. The vine has a wide distribution on all the lower slopes. It is not used to make wine, unless the local population is largely Christian, for the Mohammedan religion forbids the use of wine. But grapes are much eaten, and also are dried as raisins, in which there is a large export trade from the west. The central plateau, as we have seen, is generally treeless, though chestnuts and willows grow along some of the water courses.

There are some good wheat lands on the edge of the plateau, notably about Sivas in the upper basin of the principal northern river, the Kizil Irmak. Besides cereals, important crops are tobacco, the opium poppy, liquorice, and cotton. The mulberry tree is grown to feed silk-worms, especially in the north-west.

137, *Live stock.* Asia Minor affords an interesting contrast in geographical effects upon the pasturing of flocks and herds. On the moist rich pastures of the north there is plenty of grass at all seasons, and the conditions of pasturing of cattle and sheep are something like those of western Europe. But on the plateau and in the Mediterranean region proper, of the west and south, we find what we have noticed before in Mediterranean lands, a pastoral occupation dependent on seasonal movement, and having nothing to do with settled cultivation. The grass grows in the lowlands during winter and spring ; in summer it is dried up. In the uplands it grows in summer, but the winters, as we have seen, are too hard for flocks and herds to live out of doors. So at the changes of the seasons there are great emigrations from lowland to upland pastures, or in the reverse direction. We have already noticed the flocks of sheep on the plateau. The Angora goat, yielding mohair, is also common. Cattle are less so, except in the north, but oxen are often used for ploughing and carting. The donkey is an important beast of burden, and so is the camel (the one-humped dromedary); a string of camels in a caravan often have a donkey as their leader. During the great war, live stock was much reduced in numbers.

138. *Manufacture.* Among the more important industries are the manufacture of carpets and those connected with the yield of silk, mohair, wool, and tobacco. Although much of the natural forest has been

destroyed there is still some trade in timber, especially in the west, and many streams are used to drive primitive saw-mills.

139. *Population.* The ruling people are Turks, but many of the inhabitants who are called Turks, being Mohammedans, are really descendants of older peoples whom the incoming Turks conquered. Besides settled inhabitants, there are half-nomads like the Turkomans and Kurds, who live in villages in winter but wander in summer, and the Yuruks who move about with tents of black goats' hair, growing crops on the plateau, and descending to the coastal lowlands after they have harvested. There are also a good many gipsies, especially in the south. Under Turkish rule there has been strife between Mohammedanism and Christianity ; and many Greeks who inhabited Smyrna and other coast towns, and Armenians who were most numerous in the east, have been killed or driven out. The Adalian plain on the south coast (more commonly known as the Pamphylian plain, from the ancient district of Pamphylia which included it) and also the southern slopes generally, are naturally isolated, having only difficult routes to the interior, while the few good natural harbours are not near the more productive lowlands. The inhabitants of this region, therefore, have always been rather isolated, and still are so to some extent; they are largely descendants of early occupants, before the Turks came into the land. The case of the Cilician plain is different. Main routes between Asia Minor and Syria cross this plain. Here the Turkish and Arabic languages meet, and into this territory, also, there has been a great deal of immigration, even in modern times. Thus there have entered half-nomadic Turkomans and Kurds: Circassians from the Caucasus, whose clean villages contrast with the dirty Turkish settlements; Moham-

Smyrna is marked out naturally as the chief western port, for it is in a situation commanding the Gediz and Maeander valleys, but free of the river-silt which has blocked more than one ancient port on this coast. The main railway passes east across the southern part of the plateau, and gets through the Taurus by means of tunnels, following a route a few miles east of a more famous ancient road-pass known as the Cilician Gates. This railway, from the Taurus region eastward, is not complete, and although it is commonly called the Baghdad Railway there is not through communication to Baghdad and the Persian Gulf. The route descends to Adana, the chief town in the Cilician plain. It sends off a branch to Alexandretta or Iskanderun, the port on the gulf of the same name which is the north-east corner of the eastern Mediterranean. The route then crosses the mountain system of Giaour Dag, east of the plain, and near the city of Aleppo joins a railway which runs south through Syria to the Hejaz and to Egypt.

141. Syria. The name of Syria is usually given, in a general way, to the country bordering the east coast of the eastern Mediterranean, and extending inland to the desert which separates it from the lower valley of the Euphrates. The name has a different political use, as will be seen presently. The desert boundary on the east is unfixed, as might be expected: in some parts there is land which is capable of cultivation, and is cultivated if it is allowed to be so, but is deserted if the marauding Bedouin Arabs of the desert become too strong for the cultivators. Just as we regarded Asia Minor as a bridge east and west between Asia and Europe, so we may regard Syria as a bridge north and south between Asia and Africa. And the lengths of the two bridges are much the same—about 500 miles, in direct lines, **from**

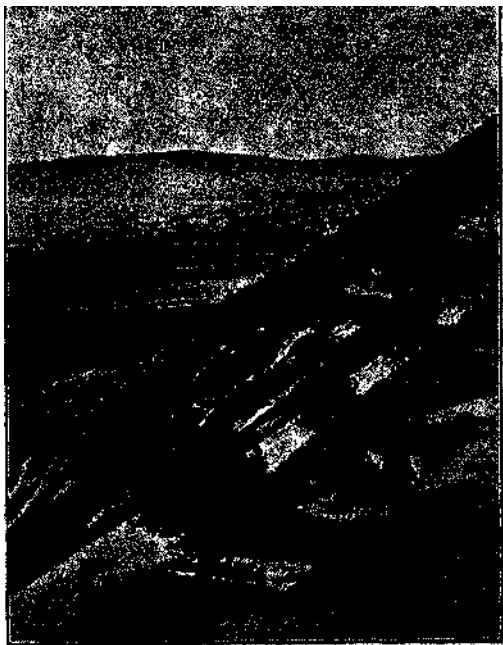
the Cilician plain to Smyrna or the Bosphorus on the one hand, to the isthmus of Suez on the other.

142. Relief. The main physical features of Syria are arranged in three parallel north-and-south belts of different relief; the western, a series of mountain-ranges or hill-systems with narrow coastal lowlands at the foot where the slopes do not reach the sea; the central, a depression; the eastern, a plateau region, broken in parts by mountains.

The coastal lowlands are very narrow, except along the southern third of the seaboard. The promontory of Mount Carmel is noticed at once in a map of this coast, which has few such points or indentations. From Carmel southward the coastal lowland broadens gradually till it becomes twenty to thirty miles wide. It represents the plains known in ancient times as Philistia and Sharon. The mountain belt reaches its greatest height, about 10,000 feet, in its middle section, Lebanon. The belt is broken by a few gaps, more or less important as lines of communication from the coast to the interior. In the north is that of the river Orontes, between the Giaour Dagħ (or Amanus) and Ansariyeh ranges. Between the Ansariyeh and Lebanon mountains the Kebir valley opens to the sea at the port of Tripoli. At the southern end of the Lebanon is the valley of the Litani; south of this, the hills of Galilee, from 4,000 to 2,000 feet in height. Then follows the important gap formed by two features famous under their Biblical names—the plain of Esdraelon and the valley of Jezreel, which give access from the bay of Acre, sheltered by the Carmel promontory. Southward again in the hill country of Samaria and Judaea, heights seldom exceed 3,000 feet: continuous high ranges are less marked than farther north, and between the Judæan hills and the coastal plain already mentioned there is a district

of undulating hills and little valleys known of old as the Shephelah.¹

143. All along Giaour Dagh, the Ansariyeh, and Lebanon mountains the western slope, toward the coast,



[From a Photograph by
Underwood and Underwood

XLIX. Bay of Acre from Mt. Carmel; port of Haifa

is gentler and better watered than the short steep slope toward the central depression. The higher parts are generally rugged and bare, but on the western flanks there are sheltered and fertile valleys, and many springs send their waters down the ravines to the sea. On the

¹ In the descriptive sections which follow, free quotation is made from *A Geography of the Bible*, by Eleanor K. Howarth, Clarendon Press, 1922.

slopes of Lebanon are many villages, whose people terrace and cultivate the spurs of the mountains. Except at a few points, such as Tripoli, the port of Beirut, and Acre, the mountains slope directly to the sea. Several ancient ports have been silted up, and islands on which stood strong towns like Tyre and Sidon have been joined to the mainland ; but Tripoli and Beirut remain as modern ports. The coastal slopes lying (approximately) between the Kebir and Mount Carmel represent the ancient territory of Phoenicia.

The plain of Sharon is an undulating land, with marsh and moor in the north, but better and cultivated land in the south ; little of its ancient forests of oak remains. Farther south, in the Biblical country of Philistia, the plain is drier, for the hills stand farther back from the sea, and are lower than in the north, so that they do not catch the rain. But there are many wells, and the soil is fertile, so that this part of the plain is a country of cornfields and flowers, fringed along the sea by sand dunes. The coast of the plain is low, unsheltered, and unbroken, being swept by a current from westward which carries silt from the Nile to the plain.

144. The hill country of Samaria extends to the fertile headland of Carmel on the coast, and rises to the Judæan table-land on the south. The slopes, though bare and unfertile, are generally easy in contrast with the table-land, a stony, scrub-covered tract, principally pastoral and isolated east and west by steep flanks seamed with gorges. To the south are wolds and arable, land, better watered, but southward again a difficult broken limestone tract merges into the desert which extends to the Red Sea, Egypt, and Arabia.

The central depression of Syria is represented in the north by a valley drained northward by the Orontes and

southward by the Litani rivers, with a low watershed between them. Both turn west to the coast; the Orontes in the plain of Antioch, where the ancient city of that name is situated, and where the Kara and Afrin rivers join from the north, making the plain a meeting-place of communications. Almost throughout, the slope from the western mountains to the depression is steep. The Litani turns west to reach the sea near Tyre, and to the east and south of its lower course there is another cross-watershed in the depression, on the other side of which rise the head-waters of the Jordan.

145. *The Ghor.* The river Jordan traverses the remarkable rift-valley of the Ghor, part of the same central depression which is continued along the Gulf of Akaba in the Red Sea, and is traced also in East Africa. The Jordan, falling quickly in its upper course, passes through the marshy Lake Huleh to Lake Tiberias or the Sea of Galilee, which is 680 feet below sea-level. Then for sixty-five miles the Jordan flows swiftly in a winding channel but a straight valley to the Dead Sea. The great cleft of the Ghor, between mountain-walls of limestone, is generally about four miles wide, and sinks until the surface of the Dead Sea is 1,300 feet below sea-level, and the bottom, at the north end, as deep again. The Ghor is a barrier between the lands to the west and east of it, and from Lake Huleh southward it forms the frontier of Palestine to the west, with Transjordan to the east, the first a territory under British administration, the second an Arab kingdom, while to the north of both is the country politically called Syria, under French administration. The most important crossing of the Ghor barrier is that provided by the Esdraelon-Jezreel route from the west, which passes over the river below the Sea of Galilee, and eastward up the tributary valley of the Yarmuk into the district of Hauran (§ 146), **The**

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Ghor is sheltered owing to its depth, and in summer is excessively hot; its vegetation, in the northern part", is rich on the bottom lands ; but the Jordan in its deep steep bed is useless for irrigation or navigation, and can only become valuable if its power be applied to generating electricity (§ 151).

146. *The Eastern Plateau* belt consists, in the north, of high rolling downs, fertile and cultivable though dry, extending to the Euphrates, and cut in two by the deep valley of the Afrin. About midway between the coast and the Euphrates is Aleppo, which has taken the ancient place of Antioch as a trade-centre. To the south the plateau continues, with isolated mountain-masses rising from it, along the east side of the Orontes valley, and then rises to the Anti-Lebanon range, the highest point of which is Mount Hermon (9,700 feet), near the head of the Jordan valley. To the east lies the rich plain of Damascus, stretching out as an oasis into the desert and irrigated by the Barada river and its tributaries. This is a very ancient trade-centre and stopping-place for caravans between Egypt and Syria and Babylonia. The Hauran region to the south—the Biblical Bashan—is a treeless expanse of volcanic rocks, fertile where it is free of stones and boulders, and producing fine wheat. El Leja is an expanse of lava with black peaks and chasms, difficult of access and forming a refuge for marauders, but the Jebel Hauran or Druse (from the Druses, its inhabitants) is a group of mountains with wooded slopes and fertile valleys on its flanks. The ancient land of Gilead, farther south, is a broken country of tree-covered hills and green glens : it merges, southward again, into the flat table-land of Moab, east of the Dead Sea, bare, but giving good pasture in spring, and cut by deep cultivable wadis or watercourses dry in summer.

147. *Minerals.* Syria is not known to be rich in minerals, though iron is worked in northern Lebanon, and there is some coal (principally lignite) in the north. There is promise of petroleum near the northern part of the coast and in the Dead Sea region.

148. *Vegetation, Agriculture, and Pasture.* The vegetation is very diverse for so small a country, owing to the great variation of relief, and consequently of temperature and rainfall. In particular, the deep depression of the Ghor, sheltered and hot, has a very large number of different trees and plants, some of which are even tropical in origin. The date-palm ripens its fruit here, but elsewhere in Syria only in southern Palestine. The papyrus, the leaves of which were used in ancient times to write upon, is found here also. In the coastal plains the banana grows, in addition to palms, oranges, and lemons ; and sugar is cultivated. In Lebanon (and in Palestine, too, to a less extent) tree cultivation is an important part of agriculture, the fig and olive and various other fruit trees being grown on the lower slopes. The mulberry is common, its leaves being fed not only to silkworms but also to sheep and cattle. The vine also flourishes here. Forests are not extensive. The eastern belt, notably in the Damascus and Hauran districts, grows the chief supplies of wheat and barley. In Palestine the grain crop not uncommonly fails for want of rain. A kind of dry farming is found on the drier lands, in which the surface of the soil is kept loose and the subsoil hard, so as to retain moisture near the surface but to prevent too much evaporation. Much of what is called the Syrian desert grows pasture enough for large flocks and herds ; but they must be moved about as the pasture is used up, so that the Bedouin Arabs of the desert are nomadic. Even if grass is wanting, the salt bushes and thorn bushes support camels and donkeys—

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the donkey is a specially important animal for transport in Syria. In Syria generally the goat is the most numerous domestic animal.

149. *Fisheries.* The open, exposed coast is not favourable to sea-fishing. But the fisheries of the Sea of Galilee are carried on as at the period of the New Testament, and there is a considerable trade in both fresh and salted fish.

150. *Population.* The Syrian peasants who grow crops and fruit live mostly in villages; the nomad Bedouin Arabs are pastoralists, and live mostly in tents. To some extent, however, the Bedouins have settled in recent years on the cultivable lands on the desert-edge. The nomads' tendency to raid the settled lands depends partly on the rainfall, being stronger when there is a specially dry season and therefore scarcity of food and pasture. Raids happen mostly in early summer, for in the spring the Bedouins have their young animals to tend. The towns and villages in the settled lands (apart from importance as trade-centres) are placed in situations which are easily defended and have a water-supply: sometimes, however, a strong position for defence has been thought more important than a position by wells and springs: then there must be cisterns to store water. Of the largest towns, Aleppo and Damascus are inland trade-centres as we have seen; Beirut is a port; Jerusalem must originally have been a stronghold, and its later growth depends largely upon its fame as a holy place. In modern times numerous Jews have settled in Palestine, coming from various countries (especially those, like Russia and Rumania, where they have been treated hardly) to the land which their forefathers occupied: the hill of Zion at Jerusalem gives the name to the Zionist movement which has brought many of them here. Large numbers of Syrians emigrate,

especially to North and South America, where prosperous colonies of Syrian merchants are found ; but a good proportion return. There are also in Syria, as might be expected in a ' bridge ' country, and as we found in Asia Minor, various other peoples—Turks (till lately the ruling people), nomad Turkomans, Kurds, and Armenians principally in the north, with a considerable number of Europeans in Jerusalem and other centres.

151. *Industries, Towns, and Communications.* Such industries as exist are concerned mostly with the agricultural products—the making of olive oil and soap, the drying of grapes for raisins, the preparation of grape syrup and wine making, the manufacture of tobacco, of which the coast town of Ladikieh or Latakia gives its name to a particular sort. Of the ports, Alexandretta exports especially live stock, textiles, and silk; Beirut, silk; Jaffa, oranges (one sort of which are named from the place); Tripoli, wool, hides, olive-oil, oranges, and silk cocoons ; Haifa, grain. A railway from Aleppo runs south along the plateau belt by Damascus and to Medina in the Hejaz : it sends branches by the gap of the Kebir (§ 142) to the port of Tripoli, and through the Lebanon to Beirut, while another line runs west from it by the Yarmuk-Jezreel route across the Ghor to the port of Haifa under Mount Carmel, and south along the coastal plain into Egypt. This line is crossed by one between Jerusalem and Jaffa, its nearest port.

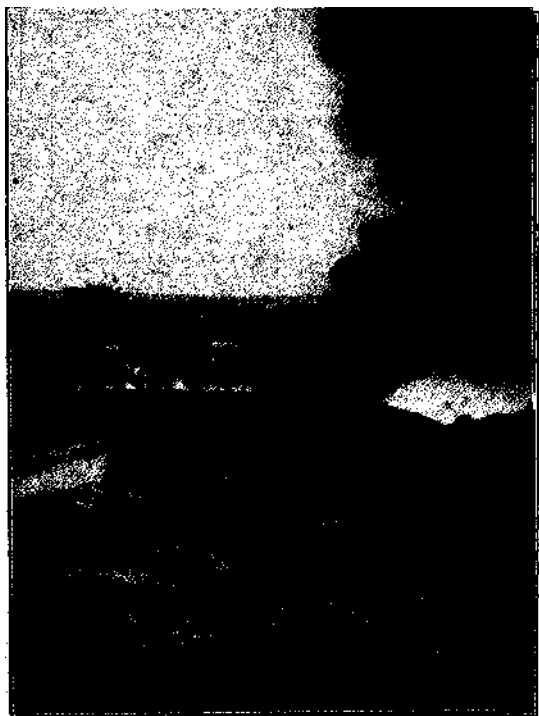
A beginning has been made in Palestine with the use of water-power to generate electricity, a station having been erected on the Auja near Jaffa, whence the electric current is supplied to that town. Schemes for the use of power from the Jordan are under consideration.

152. *Mesopotamia.* We saw in § 146 that at the northern end of the eastern plateau of Syria there are

' high rolling downs, fertile and cultivable though dry, extending to the Euphrates'. Here the Euphrates approaches nearest to the Mediterranean (about 100 miles in a straight line); and there is a break, between Amanus and Lebanon, in the barrier of mountains' which walls in the eastern part of the sea. This district, then, gives access as we have seen from Asia Minor and the Levant to Mesopotamia, and is important on that account; it contains numerous villages, in contrast with the Syrian desert farther south, and we may imagine it as a distributing centre of grain and other crops, in early times, south, east, and west. Through the break in the mountain wall modified Mediterranean conditions of climate and production penetrate eastward : this can just be seen in our little map of the mean annual rainfall, where the 20-inch line bulges eastward at this point; and in that of the distribution of the olive-tree, which also is seen to extend eastward hereabouts.

The name of Mesopotamia is given broadly to the great depression which is reached through this district, lies between the highlands of Asia Minor and Kurdistan on the north, those of Persia on the east, and the Syrian Desert on the west, extends south-eastward to the Persian Gulf, and is watered by the two great rivers Euphrates and Tigris. These rise far up in the northern highlands, and unite to enter the Persian Gulf as one river, the Shatt el-Arab. About midway in their courses through the depression they approach within forty miles of one another, and about here the character of the depression changes: to the north it is a low plateau, largely of limestone, and broken by low ranges of hills ; to the south it is a very flat alluvial plain. The northern part is known by the native name of Jezireh, the southern as Iraq ; but the whole, except the north-western part which is part of French Syria

(§ 145), belongs to the Arab kingdom of Iraq, and Britain Has a mandate for its administration, after winning the land from the Turks in the great war. The climate is sub-tropical, and as the land is far from any large sea,



L. Bitumen well at Hit : river Euphrates

the temperatures run to extremes—great heat in summer, sometimes cold, even with snow in places, in winter; and it is mostly dry, with only a few inches of rain in winter, brought by depressions moving from the eastern Mediterranean to the north-west. Where irrigation can be used from the rivers the land is very fertile, and irrigation was

far more widely extended in very ancient times than it is now (compare § 167). The chief products are dates—the west side of the Shatt el-Arab is one of the chief date-producing districts in the world—wheat and barley, rice, millet, wool, skins, liquorice, and gums. At several parts in the northern and eastern highlands, petroleum, coal, copper, and other minerals are worked or known to exist, and pitch is obtained from bitumen wells at Hit. Large ships go up the Shatt el-Arab from the sea to Basra, the chief port, and the rivers afford inland navigation, though it is not easy. The Tigris is the more important river, and on it are the chief towns, Baghdad and Mosul. There is railway communication from Basra along the lower Euphrates and thence to Baghdad and northward, but, as we have seen, the connexion is not complete to Syria, Asia Minor, and Europe. Trade therefore passes mainly through the Persian Gulf. Journeys have been recently made, however, by motor-cars with a view to a route for mails and passengers eastward from Damascus across the Syrian desert, which is not wholly sandy, but has in large part a hard surface overlaid with gravel or shale. It is necessary thus far to notice the relations of Mesopotamia with the Mediterranean region, although the one is not strictly a part of the other.

IX

MEDITERRANEAN AFRICA

153. *Egypt*. We return now to the low desert coast of the south-eastern Mediterranean, where the winter rainfall is least (§ 16). The Sinai peninsula lies between the gulfs of Akaba and Suez at the head of the Red Sea, and the boundary between Palestine and Egypt, Asia and

Africa, runs from the south-east corner of the Mediterranean to the head of the Gulf of Akaba. The peninsula is mostly a dry sandy area, rising to dry clear-cut mountains in the angle between the gulfs ; but it may prove to have valuable petroleum deposits, such as have been found on the opposite shore of the Red Sea, in Egypt but outside our region.

At the isthmus of Suez, the Suez Canal connects the Mediterranean with the Red Sea. Immediately west of this, the desert coast is broken by the delta of the Nile, the shore-line of which is built out by the river in a wide curve. Behind this are extensive shallow lagoons, into which flow the smaller distributing streams of the delta ; the two main mouths of the Nile are those named from Damietta and Rosetta, towns at their mouths.

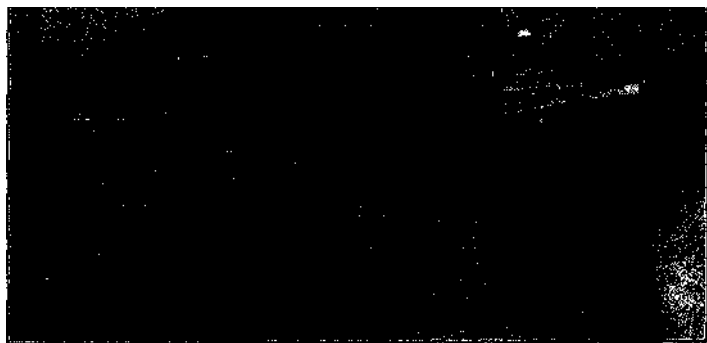
154. *The Nile and Irrigation*, The land about the mouths is marshy and scarcely inhabited—an unfinished bit of country. The delta is flat, cultivated, and divided in all directions by irrigation canals, and is thickly peopled. For the settled and cultivated portion of Egypt consists of only about a thirtieth part of the whole area—it is the strip along the Nile, its delta, and the Fayum district to the west, all irrigated from the river. The Nile is the life of Egypt. Rising far south in Central Africa, and fed by tributaries from the Abyssinian highlands, it is supplied mainly by the rainfall upon those highlands from June to September. They send the tributaries (Sobat and Blue Nile) down in flood : the main channel cannot carry off all the water at once, and the waters above the junctions are held up for a period by the incoming torrents. Therefore the waters are fed gradually to the lower river, and the season of high water runs from August to January, being highest in August and September, and then falling. The low-water season begins in January, and the level is

lowest from April to July. Irrigation is provided all the year round in Lower Egypt (the delta) because the water is regulated by a great dam at Assuan and barrages at other points, which prevent flooding at one season and scarcity of water at another; for under simpler systems of irrigation, such as have been carried on from earliest times, shortage of rain at the sources, and as a result a summer rise of the river less than usual, meant failure of crops, and famine.

155. *Crops.* In Egypt generally, the chief summer crops (sown in March and harvested in autumn) are cotton, sugar, and rice. In July more rice is sown, together with maize, millet, and vegetables. Cereals (wheat, barley, &c.) are winter crops, sown in November and harvested in May and June. It was the modern importance of the cotton crop, with the necessity of irrigating it through summer, which mainly determined the building of the big irrigation works mentioned above. The natural vegetation of Egypt, as distinct from cultivated plants, is of course scanty, save in the oases of the west, with their wells. Here also date-palms and various crops are grown.

156. *Populations, Towns, and Communications.* On the cultivated portion of Egypt the population is very dense—over twelve millions on 12,000 square miles, or more than a thousand to a square mile. About three-fifths of the whole population are agricultural *fellahin* or peasants, and about nine-tenths are Mohammedans. Egypt is a kingdom, in which Britain has a large interest, in view especially of the fact that it was under British administration that modern irrigation works were built and the trade developed, and also of the importance of the Suez Canal to imperial communications. Four to five thousand ships pass through the canal in a year. Port Said is the port at its Mediterranean end, Suez at

the entrance to the Red Sea. The length is 87 miles, but a quarter of this is through lakes. The isthmus is so low that the canal runs level from sea to sea, without locks ; it is crossed at El Kantara by a bridge, which swings to allow ships to pass, and carries the railway between Egypt and Palestine. Several railways branch through Lower Egypt, serving the chief port, Alexandria



L I. Entrance to Suez Canal, Port Said

(at the west corner of the delta) and other towns, and converging at Cairo, the capital, at its head, whence also a railway runs south up the Nile valley. A narrow-gauge line runs through the desert to the oases of the west. Till the middle of last century trade was carried on by boats on the Nile (and there is still a large river traffic) or by caravans of camels crossing the desert. Camels still bring produce to the railways and river-steamers, but the days of the great caravans bringing gold, ivory.

and slaves from Central Africa, or silks, carpets, and precious stones from the East to Cairo, are over. On the other hand Heliopolis, close to Cairo, has the promise of becoming an exceedingly important centre of air communications between Britain, Europe, South Africa, Asia, and Australia.

The principal exports of Egypt include cotton, cereals, vegetables, eggs, and hides.

157. *Italian Libya.* A depression with oases extends westward from the Nile delta to the head of the Gulf of Syrtis or Sidra. The plateau of Barka, forming the eastern shore of this gulf, projects northward, and near its northern coast (which is steep) rises to 3,500 feet in Jebel Akhdar. The plateau is within the country of Cyrenaica, which is the north-east part of the Italian possession of Libya (officially Libia). The north-west part (west of the gulf) is Tripolitania, and the colony extends far south into the Sahara desert, at least nominally. But only a strip along the coast some eighty miles wide is of any importance. The land around the gulf is low, and Tripolitania has also a coastal lowland, from which plateau land rises above 2,000 feet to the south. Palms and olives are characteristic of the cultivated parts of the coastal belt; the banana grows in Cyrenaica. The olive and fig extend in some places up the plateau slopes, with vines and almond trees, and at higher levels cereals (especially barley) are grown. Saffron is also cultivated. Much of the interior (and indeed of the coast lands) consists of dry steppe at the best, with pasture becoming thinner until it merges into the desert. Esparto grass is common over the steppe on the desert edge.

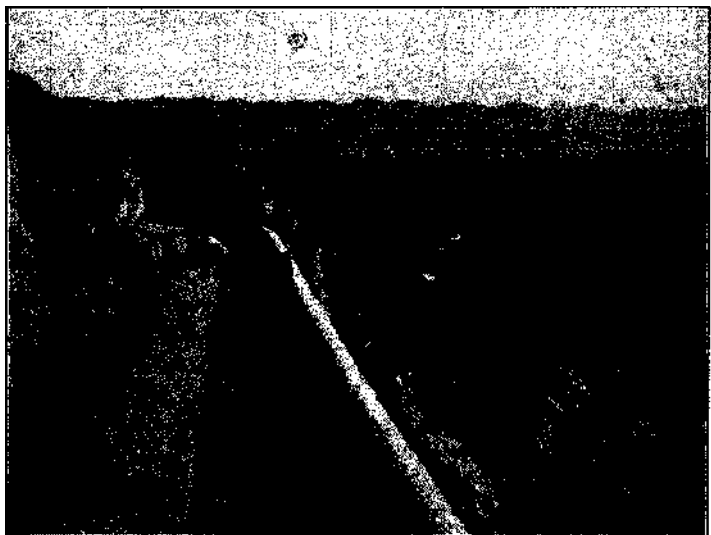
This country is obviously not one to support a dense population. About three-tenths of the whole are Arabs, and about two-fifths negroes ; there are also Berbers,

a good many Jews in the towns, and a few Europeans. The capital of Cyrenaica is Bengazi; that of Tripolitania, Tripoli. Cyrenaica, projecting into the Mediterranean opposite Greece, and not far off the direct route between Malta and Egypt, might have been compared (as we compared Italy) to a quay for shipping; but it has no good natural harbours, and there is only the vast desert behind. Yet there is a caravan trade across the Sahara to Bengazi and Tripoli, in leather from the pasture-lands beyond the desert, in ostrich feathers, ivory, and other products of Central Africa. The Italians have built a few railways in the coastal belt of Tripolitania. The sponge-fishery (§ 99) is of some importance.

158. *The Atlas Region.* It is to be noticed in a map of Africa that the north-west of the continent, which is the Atlas region, reaches out, as it were, toward south-western Europe, being surrounded on three sides by sea ; for west of Tripoli the Mediterranean coast turns north. Barred off from the rest of Africa by the great desert of Sahara, it belongs rather to Mediterranean Europe, in respect of its physical features, natural vegetation, and animal life, though not wholly so in regard to the last, for the desert is not an absolute barrier for living creatures. The Atlas region is divided politically between the Arab state of Tunis, under French protection, the French colony of Algeria and the sultanate of Morocco, Moghreb el-Aksa, 'the farthest west' of Mohammedan lands. Most of this also is under French protection, but the north coastal strip, nearest to Spain, is under the protection of that country ; and Tangier, the port on the Strait of Gibraltar, is under international control.

159. *Relief.* The Atlas mountain-system stretches east and west through the region. It thus leaves a coastal lowland from fifteen to fifty miles wide in Tunis, facing east where the gulfs of Gabes, Hammamet, and

Tunis indent the shore. In the west (Morocco) the main chains of the Atlas bend south-west, so as to run nearly parallel with the Atlantic coast, and there are long slopes and lowlands about 150 miles wide between them and the sea. But the north (Mediterranean) coast of the region has only small lowlands at intervals, for the northern chains of the mountain system run parallel



LII. Oasis on the southern edge of the Algerian plateau : El Kantara

and close to it. They are a good deal broken by a succession of rivers with steep courses, torrents during the winter rains, nearly dry in summer, but useful for irrigation. These rivers in some cases turn sharply to the sea from their upper valleys behind the coastal ranges, in a way that recalls, on a smaller scale, the northern rivers of Asia Minor. The coast ranges are known under various names. The coastal region of Algiers is sometimes known generally as the Tell, but

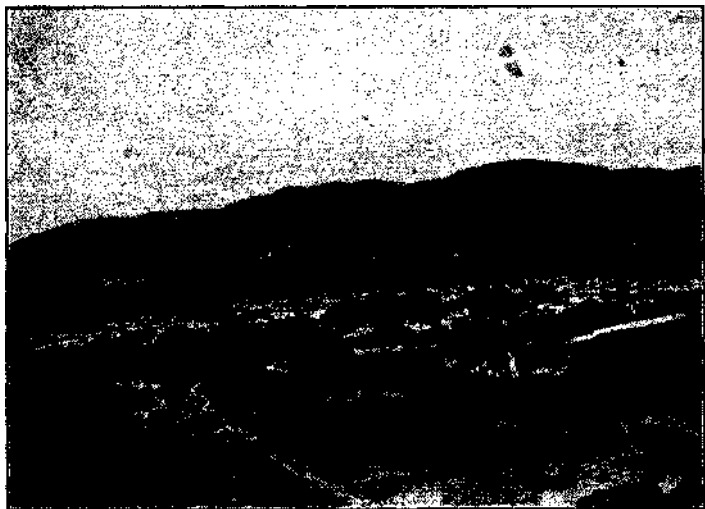
this name is also applied particularly to the valleys behind it. The north-western branch of the mountains, in Spanish Morocco, is known as the Rif. Behind the northern valleys the region rises to plateaux, whose edges are mountainous : the mountains of the northern edge are the lower, and are sometimes called collectively the Little Atlas, but this name is rather vaguely given. The mountains of the southern edge are called in Algeria the Saharan Atlas, for they fall southward to the Sahara desert : in Morocco, where they reach their greatest height, »the name Great Atlas is given them. We have thus, roughly speaking, a succession, from the north coast, of hills and valleys, mountains, plateaux, mountains, desert.

160. *The Shats*. Inland from the Gulf of Gabes a depression, extending westward, is partly occupied by *shats*, extensive flat-bottomed basins, generally of dry mud with a grey or white crust of salt, but sometimes, in wet weather, forming lakes a few feet deep. In the eastern part of the depression hot springs, both fresh and salt, issue from the hills to the north, and are useful for irrigation. The lowest part of the depression in eastern Algeria, is about thirty feet below sea-level. To the north-west it communicates, through a gap in the southern mountains, with the high level of the plateaux mentioned above. Here also are several *shats*, having no drainage to the sea ; and again we may compare (though" only in a general way) the central plateau of Asia Minor.

161. *Minerals*. The Atlas region is probably much richer in minerals than their working at present suggests (here is a third comparison with Asia Minor). In Morocco, particularly, there is believed to be a great wealth of gold, silver, copper, and petroleum, in addition to the iron ore which is worked to some extent. But many of

the people of this country are still hostile to Europeans, so that it has not been at all fully opened up for development and trade, whether in minerals or in agriculture or in manufactures, although, as we shall see, progress has been made, principally by the French. Algeria and Tunis yield iron, zinc, and lead, and phosphate of lime.

162. *The Vegetation Zones* accord as usual with the water supply and elevation. The most fertile belt with



LIII. Tlemeen

the richest vegetation is that of the coasts—the sandy Sahel or coast region in Tunis, the northern valleys and small coastal lowlands, the western slopes and Atlantic coastal lowland of Morocco. The plateau belt has little but pasture at the best, with esparto grass, and the southern slopes to the desert are dry, save where oases are marked by date-palms and gardens (compare § 23). Irrigation, in addition to that from rivers, is got in some parts of Algeria from artesian wells, deep borings from

is Ceuta, opposite Gibraltar. Tangier, at the Atlantic entrance of the Strait, has been mentioned before. The outlet for most of Morocco, however, is toward the Atlantic, not the Mediterranean, and there is a series of ports along this coast, of which Casablanca is the chief, but Rabat is a centre of government. Inland, on the lower slopes of the Atlas, are Marrakesh or Morocco City and Fez, at both of which the Sultan has palaces, together with Mekinez.

164. *Communications.* The French have constructed a great length of railways in Tunis and Algeria, and some in Morocco, and there is a continuous line from Tunis through the northern valleys of Algeria to Fez, Mekinez, Rabat, and Casablanca. Lines also run southward through Tunis, connect the principal ports of Algeria with the valleys behind, ascend to the plateau at several points in Tunis and Algeria, and in two cases in Algeria run right across the mountains to the edge of the desert beyond, to Biskra and Tuggurt in the eastern depression, and to Colomb Behar in the west. There are even schemes to carry lines across the Sahara to the French territories in West and Central Africa. The French are also great road-builders ; but most of the Atlas region is naturally sparsely populated, and much of it is still difficult of access.

165. *Products and Export* The better cultivated lands of the coast zone in Tunis and Algeria, and to a small extent in Morocco, are owned by Europeans. They yield the usual Mediterranean products, and thus we find among the chief exports of Tunis and Algeria wine from the vineyards, olive-oil (from the groves and plantations), oranges, lemons, figs, dates, and other fruits, wheat and barley. Tobacco is grown and cigarettes are made especially in Algeria; silk and esparto grass are among other products, with almonds,

beans, and linseed especially from Morocco. Vegetables (especially those grown earlier in the year than they can be farther north) are exported from Algeria. Sheep and goats are the chief live stock, with horses on the plateau ; hides are an export, and native work in leather and wool is well known. The so-called Morocco leather was originally made by the Moors in that country and Spain, from goat skins. Eggs are an export from this as from other divisions of Mediterranean Africa. The Tunisian fisheries, for tunny, sardines, and anchovies, are important, the Italians, whom we saw (§ 99) to be great fishermen, taking a large part in them ; the sponges are fished also by Greeks.

X

GEOGRAPHY AND HISTORY

166, Those of us who have to read any of the history of Mediterranean lands must know and keep always before us the geography of those lands, because the two studies are related in many ways which cannot be detailed in this book. The general geographical setting for the historical picture (so to say) has been given in previous chapters. But at any particular period of history—even of modern history, down to the great war—there would have been a different set of political divisions to consider, different details to study. They are set out in other books ; but we will collect now a few general geographical ideas which concern the history of the lands of whose present conditions we have been reading.

167. *Westward Movement of Power and Culture.* The chief centres of political power and high civilization in

the Mediterranean are found at first in its easternmost part and afterwards, in succession, farther west. Thousands of years before Christ there was a centre of power and culture in Egypt, and there was another, just outside our region, in Mesopotamia, the lower basin of the Tigris and Euphrates. Here were fertile riverside lands, attractive to man's settlement because they are surrounded by desert or inhospitable mountain country where settlement was impossible. In such lands civilization may be supposed to have begun. At a fairly early stage in the growth of civilization men learned navigation where there was water on which to do so ; and thus, still between two and three thousand years before Christ, there appears in the Aegean, and especially in Crete, an island-centre of power and culture, which we know as Minoan. Its trade by sea developed in the eastern Mediterranean and with Egypt, and at least as far west as Sicily. About 1500-1200 B. C. this centre of culture was attacked, apparently by its own outposts on the mainland of southern Greece, and by invaders from the Balkans or beyond, and finally it broke down. Meanwhile the Phoenicians, of Semitic (Arabian) origin but long settled on the narrow coastal foreland at the foot of the mountains of northern Syria, after ages of coastal traffic between Sidon and other ports and Egypt and Cilicia, looked to the west, made Tyre their chief port, and carried trade by sea right through the Mediterranean and out at the other end, for they passed the Strait of Gibraltar and went north and south along the Atlantic shores, which is more than any other people did till some seven hundred years later. (The Greek historian Herodotus has a story that about 600 B. c. Phoenician navigators sailed round Africa; and no one else did that for two thousand years.) They founded trading centres in Cyprus, north Africa (notably

Carthage), Sicily, Sardinia, and the south of Spain (including Cadiz). But though great in commerce they were not so in arts and culture, in the sense in which either the Egyptians were, or the Greeks who come next on our list.

168. *Greece.* Greek civilization appears first in the eastern part of the Greek peninsula, not in the islands. These were colonized from the mainland (and the Phoenicians were kept out of them); later there were Greek colonies all round the Mediterranean, except in Egypt and in central and northern Sicily. But the Phoenicians were before, and were stronger than, the Greeks in most of north Africa and in the western Mediterranean : from their opposition and that of the Etruscans in Italy it resulted that Massilia (Marseilles) was the only great Greek city so far north-west; and the Greeks did not settle beyond the Strait of Gibraltar. The Greeks formed a large number of independent city-states, not uniting as one great State or Empire for the purposes of government, although from time to time groups of these small states did form leagues for the purpose of making war. We shall find presently a geographical reason for their division. Greek states flourished not only on the peninsula but also elsewhere, for some of the colonies, such as Miletus in Asia Minor before 1000 B. C., Sybaris in Italy, and Syracuse in Sicily in the eighth century, started as independent powers, and there are many other later examples.

169. *Rome.* Next follows Rome. Early history shows in Italy, as elsewhere, a division into many small regional peoples and leagues of states, but by about 280 B. C. Rome was the political capital of all peninsular Italy (not the northern plain) excepting a few Greek cities in the south. Then begins the long period during which, at first by peaceful commerce and

Indeed, a hundred years earlier Rome itself had ceased to be the centre of the empire, and there were rulers of different parts, living near the frontiers, and practically independent one of another. This led to Byzantium on the Bosphorus becoming an imperial city, for when Constantine the Great became sole emperor (323) he made his capital here, and from him it became known as Constantinople. The Roman Empire separated into eastern and western empires, the Adriatic Sea indicating a natural division: this happened several times before the final division in 800; but long after Italy had ceased to be the heart of an empire, and indeed when it had once more become partitioned between various political states, it remained the chief centre of learning and culture in Europe, from the twelfth to the fifteenth century and later.

171. *The Arabs and Spain.* Mohammed, the founder of the Mohammedan religion, lived from 569 to 632. Inspired by him, and perhaps (as a geographical reason) because they became too many for their own half-desert country to support, the Arabs from this time onward spread as conquerors far over the lands to the west. They conquered Syria, but never had much success beyond the Taurus. Egypt, however, was easily overrun, and then they moved through the Atlas regions, and crossed to Spain in 710. They worked their way through the peninsula, and for a time even extended their power a little north of the Pyrenees; but not for long. To Spain, however, or part of it, they clung for several centuries. By 1237, however, their power in Spain was broken, except in the south, and at this time there were four Christian states in the peninsula—Castile, Aragon, Portugal, and Navarre—together with the Arab kingdom of Granada. Of these,

Aragon had most to do with Mediterranean affairs, as it bordered the east coast. In 1492 the Arabs were driven out of Granada, and early in the sixteenth century the whole peninsula except Portugal was united politically, and Spain, the westernmost of the Mediterranean peninsulas, became during most of that century the seat of the strongest power not only in the Mediterranean region but in Europe.

172. *The Atlantic.* It was Portugal, however, followed by Spain and other nations, which led the movement, by way of colonization and conquest, from Mediterranean and European countries to distant lands across the oceans. About 1415 this movement began, with voyages to the Canary Islands and later to the Azores and Madeira; the western coast of Africa was gradually explored, and in 1497-8 Vasco da Gama, sailing from Lisbon, rounded the Cape of Good Hope and found the way to the Far East. Meanwhile in 1492-3 Christopher Columbus; seeking a route westward across the Atlantic to the Far East, had found instead the 'new world' of America. He was sent by Spain, though himself a Genoese; but Genoa, as well as Portugal, Venice, France, and England, all naval powers, had rejected the plan of his voyage before the Spaniards accepted it. Upon this movement from the Mediterranean to the ocean, from the lesser to the greater sea, is based all the history of overseas colonization down to modern times.

173. *Natural and Political Division.* One of the geographical ideas which comes often before us in Mediterranean history is the influence of surface-features upon political division. We have seen all through this book how the lands bordering the Mediterranean are mostly divided up into valleys, small plains, and hill-country, and into different kinds of hill-country;

and how the whole region is divided up into peninsulas, islands, and forelands. This helps to account for the many small political states, and the tendency for larger ones to divide themselves, which we find all through the Jiistory. The Bible narratives give examples in Syria and Asia Minor. Greece we have already noticed as an example, and it is the best. If we read again the description of the Greek peninsula, we find a geographical reason for this in the minute division of the land into valleys and sheltered bays of the sea, separated by high hills which prevented easy communications by land. Thus we get a reason for the division of Greece, through the period when Greek civilization stood highest in the Mediterranean region, into small city-states such as Mycenae, Argos, Sparta, Athens, Thebes, and others ; thus, too, we account for the fact that Aetolia, and particularly Epirus, a western territory isolated as we saw from the east of the peninsula, became powerful states only rather late in the period.

174. Italy also began in political division, for the Apennines and their offshoots separated it naturally, but less markedly than in the case of Greece. So Rome at length united it, though it is to be noticed that Roman rule had extended beyond the shores of the peninsulu before continental Italy (the Po basin north of the Apennines) was conquered about 224-190 B. C. This part, indeed, was known by a foreign name—Cisalpine Gaul, Gaul on 'this' (the Italian) side of the Alps, as distinct from Transalpine Gaul, or France, beyond them. Part of the division was marked by the Rubicon, a small stream below the eastern portion of the northern Apennines : Julius Caesar, after his conquests in Gaul, declared civil war upon Pompey and the senate which ruled at Rome, by 'crossing the Rubicon' in 49 B. C. With some of the various divisions

into which Italy fell at various times after the break-up of the empire, natural geographical conditions had little or nothing to do. But it should be noticed that some of the ports became city-states largely on the strength of sea-power—Genoa, for example, and Pisa (no longer a seaport now), and, of most interest from the geographical point of view, Venice. There is a parallel to some of the early Greek city-states here.

175. *Venice* comes into view as an island refuge, among the lagoons at the head of the Adriatic, as early as the fifth century A. D. Early in the thirteenth century it became a port of departure for Christian Crusaders going to fight for the holy places of Palestine—Jerusalem and others—against the Mohammedan Saracens who had taken them. Venice extended its possessions along the eastern shore of the Adriatic, in the Ionian Islands, the Pcloponnese, and other parts of the eastern Mediterranean. It had no large territory on the mainland of Italy until the fifteenth century. Its power and wealth rested chiefly on eastern trade, and the discovery of the sea-route to the Far East round Africa was a blow to this, though Venice, secure among the lagoons, remained independent till the eighteenth century. Following up the geographical idea of division, we need only notice as further Examples that the Arabs, after the great extension of their power, divided into separate caliphates, eastern and western (and others later), under caliphs or 'successors' of Mohammed; and that the Iberian peninsula was divided as we have seen into a number of states and still is divided into two, Spain and Portugal.

176. *Communication and Geographical Knowledge.* If natural difficulty of communication had something to do with the formation of small states, so had slowness of communication, a point worth remembering as

against our own quick means of travelling and instantaneous means of speaking by telegraph and telephone. The Romans built magnificent roads through their empire—some where nobody has built good roads since, such as the Egnatian Way from the Adriatic shore east across the difficult mountainous country at the base of the Greek peninsula. And so far as they knew how, they carried on communication quickly on those roads, with horses and runners ; but they never found out any mechanical means of communication—not even the cycle. Having this difficulty, they never discovered a sure way of governing far distant possessions from a central capital. With slowness of communication is connected the small extent of geographical knowledge : excepting soldiers and traders very few people travelled far, and knowledge of countries at any considerable distance depended on their stories. To take one example : the early Greek Homeric poems, the *Iliad* and the *Odyssey*, show a fair knowledge of the lands immediately around the Aegean, though little of the interior of Asia Minor ; something is known of a land as far away as Sicily, and of the wealth of Phoenicia and Egypt, but all else is vague. Black men have been heard of in Africa, and there are passages which suggest that news of the long periods of summer daylight and winter darkness in the far north, and of the calm fiords of the Scandinavian coast, may have reached the Mediterranean lands thus early. At any period of Mediterranean history, down to that of ocean exploration in the fifteenth century, it is worth noticing what was the condition of knowledge of the world beyond the Mediterranean **region**.

177. *The Mountain Barriers and Bridge Lands.* The mountain systems around the Mediterranean region, by making local communications difficult, tend also to keep

the inhabitants of some parts isolated from relations with the outside world. We have found several modern examples in previous chapters, as in the case of the Basques in northern Spain, the Sardinians and Corsicans, the Albanians, and others. The mountains of northern Spain provide also a good historical example ; for here Christian people kept themselves free through the period when the Mohammedan Arabs overran the rest of the country. On the other hand, great mountain systems like the Pyrenees, Alps, those of the Balkan Peninsula, and the Taurus, having natural gateways through them, are not complete barriers to invasion of the Mediterranean lands. The early Aegean civilization was probably attacked by invaders from the north, far beyond the Mediterranean region. The Roman Empire at its greatest extent, at the beginning of the second century A. D., reached from the Atlantic to the Caspian Sea and the Persian Gulf, and from North Africa to the Danube (and beyond parts of it), the Rhine, and Britain. At the end of the fifth century, after this great power had been broken, the kingdom of the East Goths extended from central Europe over the Italian peninsula and Sicily, that of the West Goths from what is now the centre of France over most of the Iberian Peninsula ; and other northern invaders, the Vandals, had established a kingdom in the Atlas region. The great mountain systems were no barriers to these; and other illustrations of the same fact may be found, especially in the Alpine region, in later history.

178. In previous chapters we have compared some parts of the Mediterranean lands to bridges between others. Syria was such a bridge from the very earliest times when there was communication between Egypt and the centres of civilization in the Euphrates and

Tigris basin. Asia Minor was such a bridge for many movements of invaders. Over it the Persians came to attack the Greeks in the sixth century B. C. and later. Alexander the Great, after his kingdom of Macedonia (itself a bridge-land) had become the chief power in the Greek world, marched eastward through Asia Minor to conquer, or at least explore, in 334-323 B. C., lands as far as Syria, Egypt, Mesopotamia, Persia, and northern India. And there are many examples later, down to that of the Turks, who hold the land to-day. Turks (from Central Asia) first appeared as enemies of the eastern Roman Empire in the eleventh century, but the Ottoman Turks, with whom the present Turkish empire originated, first arose to power about 1240. Overrunning south-western Asia, they established themselves in Europe about a hundred years later, though they did not take Constantinople, their capital, till 1453, when the Roman Empire of the East came to an end. Later on the Turks extended their rule all over the eastern Mediterranean, including Greece and most of the Balkan lands, Egypt, and Tripoli: the people who did most to keep them out of the western Mediterranean were the Venetians. It is only in modern times that the bad rule of the Turks has been ended in north-east Africa, Syria, and nearly all the Balkan lands over which it had spread, and we have seen that the Mohammedan religion (which the Turks profess) is still found in south-east Europe far beyond the present Turkish boundary.

179. *Memorials of History.* Of its past history every Mediterranean land holds evidence in the wonders of its ancient towns and buildings. This evidence has been added to in our own times by digging out many Egyptian, Cretan, Greek, and Roman sites, where not only the remains of buildings but also innumerable objects of

art and common use have increased modern knowledge of the civilization, history, and life of these ancient* peoples. At later dates were erected the splendid churches and palaces of medieval Italy, the noble buildings of the Arab occupation of Spain, the picturesque Venetian towns of the eastern Adriatic coast, and many other works by which men have added, by their skill, to the natural beauties of the region.

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